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FAS 1598 (CH 27 /CANNONBALL RD) over B.N.S.F. RAILWAY

PROJECT NO.: BRS-1598(100)
JOB NO.: C-96-228-11
SECTION: 11-00218-00-BR
FEDERAL HIGHWAY BRIDGE PROGRAM FUNDING

HIGHWAY STANDARDS

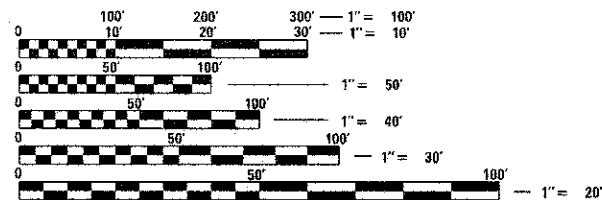
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420001-07	630001-10	701011-03
515001-03	631031-11	701301-04
542301-03	635006-03	701901-02
601101-01	635011-02	780001-03
602401-03	666001-01	BLR 21-9
602601-02		

DESIGN DESIGNATION

FAS 1598 (CH 27 /CANNONBALL ROAD)
 MAJOR COLLECTOR - RURAL
 ADT = 1050 (2011) 1280 (2031)
 DESIGN SPEED = 50 MPH

PROJECT DESCRIPTION

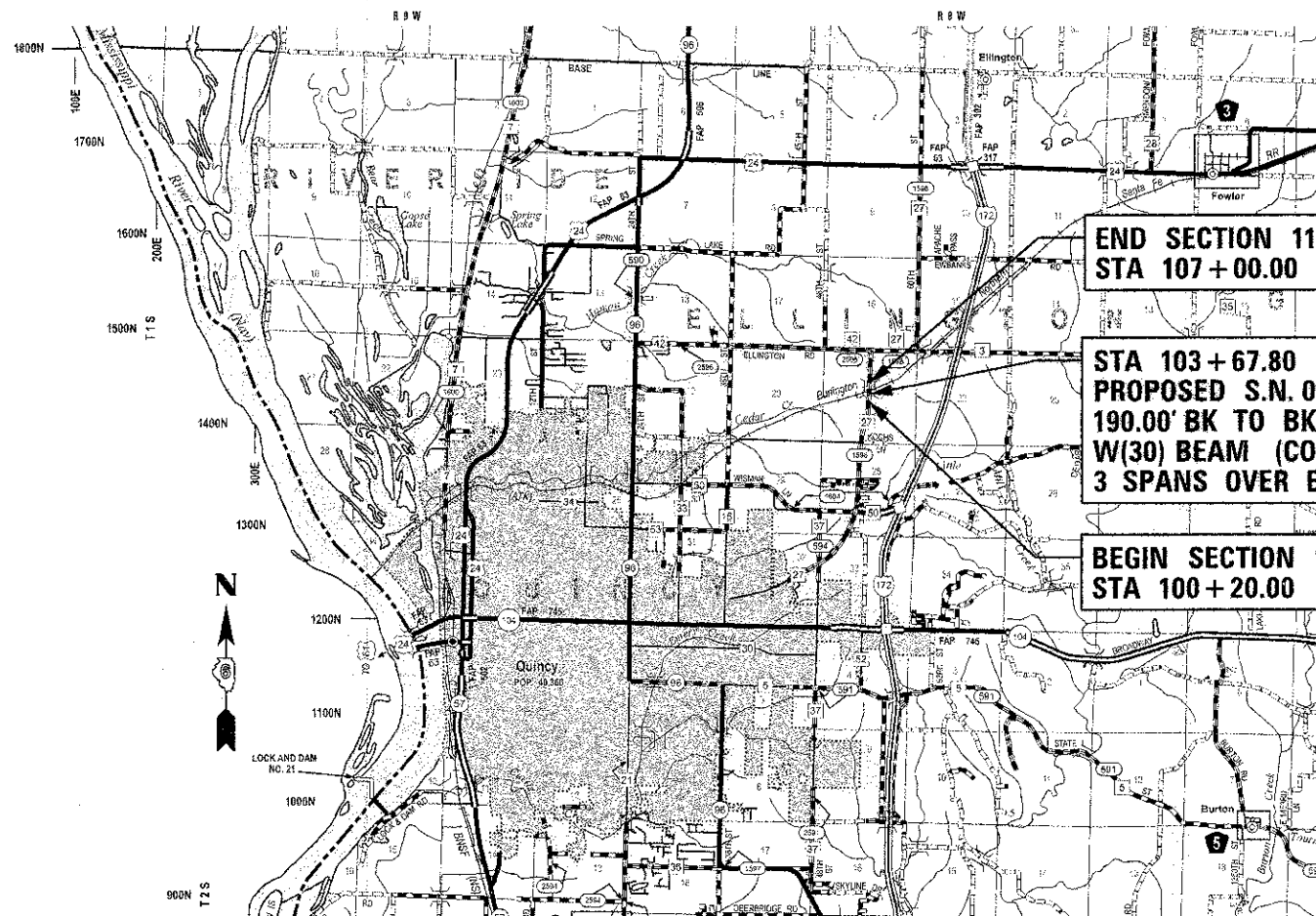
Project consists of removing the existing S.N. 001-9902 carrying FAS 1598 over the Burlington Northern Santa Fe Railway tracks and constructing a new 3 span steel beam bridge. Additional work includes HMA pavement, aggregate shoulders, guardrail, aggregate base, seeding, and other miscellaneous items.



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811

CONTRACT NO. 93590

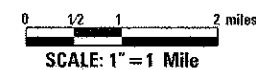


**END SECTION 11+00218-00-BR
 STA 107+00.00**

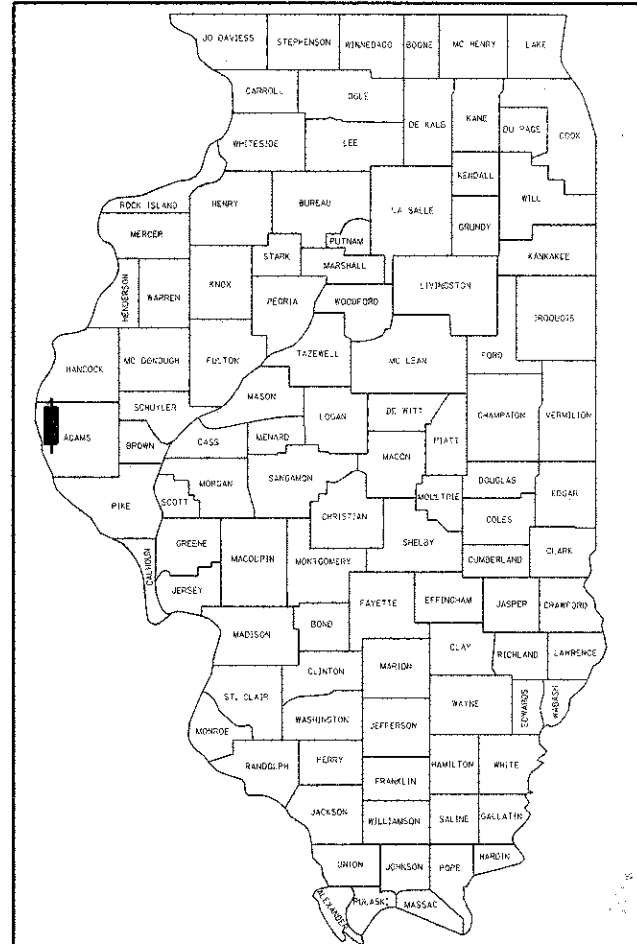
**STA 103+67.80
 PROPOSED S.N. 001-3338
 190.00' BK TO BK OF ABUTMENTS
 W(30) BEAM (COMPOSITE)
 3 SPANS OVER BNSF RAILROAD**

**BEGIN SECTION 11+00218-00-BR
 STA 100+20.00**

LOCATION MAP



NET LENGTH OF SECTION = 680.0 FT. = 0.129 MILE



LOCATION OF SECTION INDICATED THUS:

APPROVED January 17, 2013
James R. Frankenkoff
 COUNTY ENGINEER

PASSED January 30, 2013
Terrence H. Fountain
 DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS

PASSED JANUARY 29, 2013
Ron Duchambeau
 DISTRICT SIX ENGINEER OF CONSTRUCTION

Releasing For Bid Based on Limited Review January 30, 2013
Roger L. Driskell
 DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

Plans prepared by:
KLINGNER & ASSOCIATES, P.C.
 Engineers • Architects • Surveyors
 816 North 24th Street, Quincy, IL (217)223-9670 - Fax (217)223-9603
 4510 Paris Grand Street, Hannibal, MO (573)224-0020 - Fax (573)224-3312
 618 N. 4th Street, Suite 100, Burlington, IA (319)752-3993 - Fax (319)752-3959
 49 North Prairie Street, Galena, IL (309)342-4042 - Fax (309)341-3761
 Internet Address: www.klingner.com
 IL DESIGN FIRM NO.: 1842738

Steve E. Bange 1/17/13
 STEVE E. BANGE DATE
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF ILLINOIS NO. 062-053338
 LICENSE EXPIRES NOVEMBER 30, 2013

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GENERAL NOTES

1. THE NOMINAL THICKNESS FOR BASE AND SURFACE COURSES ARE SHOWN ON THE TYPICAL SECTIONS, STANDARDS, SCHEDULES, OR SPECIAL DETAILS. THE CONSTRUCTED THICKNESS OF THE ABOVE ITEMS SHALL NOT BE LESS THAN 90 PERCENT OF THE NOMINAL THICKNESS AT ANY LOCATION.

THE THICKNESS OF BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
2. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
3. ALL ELEVATIONS SHOWN REFER TO THE U.S.G.S. DATUM AT SEA LEVEL, UNLESS OTHERWISE NOTED.
4. UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION, AND THEIR TRUE LOCATION IS NOT GUARANTEED TO BE AS SHOWN ON THE PLANS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND CARRY OUT HIS OR HER OPERATIONS ACCORDINGLY.
5. ADJUSTMENTS OF UTILITY LOCATIONS SHALL BE MADE BY THE OWNER, UNLESS OTHERWISE NOTED.
6. ADDITIONAL DEPTH REQUIRED IN DRAINAGE STRUCTURES DUE TO CONFLICTS WITH OTHER UTILITY LINES WILL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR THE DRAINAGE STRUCTURE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION, AS INDICATED BY THE SUB-NUMBER ON THE COVER SHEET.
8. ALL DETAILS IN THESE PLANS SHALL GOVERN THE CONSTRUCTION OF THIS PROJECT, AND IN CASE OF CONFLICT WITH ANY STANDARD DRAWINGS INCLUDED, THE SAID DETAILS SHALL GOVERN.
9. THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS PART OF THE CONTRACT AND NO COMPENSATION WILL BE ALLOWED.
10. EXISTING MAILBOXES SHALL BE TEMPORARILY RELOCATED FOR CONTINUED OPERATION AS NECESSARY DURING CONSTRUCTION. MAIL BOXES SHALL BE RELOCATED TO THEIR FINAL LOCATION AFTER CONSTRUCTION AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS PART OF THE CONTRACT AND NO COMPENSATION WILL BE ALLOWED.
11. IN ACCORDANCE WITH STATE OF ILLINOIS P.A. 86-0674, THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES NOT MORE THAN 14 DAYS NOR LESS THAN 48 HOURS (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS) IN ADVANCE OF THE START OF EXCAVATION OR DEMOLITION.

J.U.L.I.E. TELEPHONE NUMBER
1-800-892-0123

KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF THIS IMPROVEMENT ARE:

MILL CREEK WATER DISTRICT	WATER	6415 HICKORY GROVE NORTH, QUINCY IL	(217)-224-9343
AT&T	TELEPHONE	529 SOUTH 7TH STREET, SPRINGFIELD, IL	(217)-628-1800
ADAMS TELEPHONE COOPERATIVE	TELEPHONE	405 EMMINGA RD, GOLDEN, IL	(217)-696-4411
AMEREN CIPS	ELECTRICAL	700 JERSEY, QUINCY, IL	1-800-789-2477
NICOR GAS	GAS	1375 BUCHANAN STREET, CARTHAGE, IL	(217)-357-3105

RATES OF APPLICATION TABLE

AGGREGATE (SURFACE, BASE, BASE, OR BACKFILL)	2.05 TON/CU YD
STONE DUMPED RIPRAP	1.50 TON/CU YD
BITUMINOUS CONCRETE:	
BITUMINOUS MATERIALS (PRIME COAT)	0.00038 TON/SQ YD (on pavement)
BITUMINOUS MATERIALS (PRIME COAT)	0.001425 TON/SQ YD (on aggregate)
AGGREGATE PRIME COAT	0.002 TON/SQ YD
BITUMINOUS CONCRETE SURFACE / BINDER	0.056 TON/SQ YD-IN
SEEDING AREAS:	
NITROGEN FERTILIZER NUTRIENT	90 LBS/ACRE
PHOSPHOROUS FERTILIZER NUTRIENT	90 LBS/ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LBS/ACRE
AGRICULTURAL GROUND LIMESTONE	2 TON/ACRE
MULCH	2 TON/ACRE
TEMPORARY EROSION CONTROL SEEDING	100 LBS/ACRE

FILE NAME *	USER NAME * bgj	DESIGNED - SEB	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 /CANNONBALL ROAD) GENERAL NOTES	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\11f:\10015\05 Plans\Current\SH_Gen	Notes..1015.dgn	DRAWN - EBB	REVISED -			1598	11-00218-00-BR	ADAMS	53	2	
PLOT SCALE * 20.0000" = 1"		CHECKED - SRW	REVISED -			CONTRACT NO. 3590					
PLOT DATE * 11/5/2012		DATE - 6-21-12	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES						
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				0005 ROADWAY	0011 STRUCTURE	0042 TRAINEES
20100500	TREE REMOVAL, ACRES	ACRE	0.1	0.1		
• 20200100	EARTH EXCAVATION	CU YD	2840	2840		
• 20200500	EARTH EXCAVATION (WIDENING)	CU YD	43	43		
20800150	TRENCH BACKFILL	CU YD	72	72		
25000200	SEEDING, CLASS 2	ACRE	0.7	0.7		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	63	63		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	63	63		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	63	63		
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1.4	1.4		
25100115	MULCH, METHOD 2	ACRE	0.7	0.7		
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SO YD	500	500		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	150	150		
• 28000315	AGGREGATE DITCH CHECKS	TON	25	25		
28000400	PERIMETER EROSION BARRIER	FOOT	175	175		
28000500	INLET AND PIPE PROTECTION	EACH	3	3		
* 28100207	STONE RIPRAP, CLASS A4	TON	973		973	
• 28100807	STONE DUMPED RIPRAP, CLASS A4	TON	65	65		
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	226	226		
35100100	AGGREGATE BASE COURSE, TYPE A	TON	23	23		
35650300	BASE COURSE WIDENING 8"	SO YD	288	288		
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	171	171		
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	50	50		

• SPECIAL PROVISION

FILE NAME =	USER NAME = bgj	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 /CANNONBALL ROAD) SUMMARY OF QUANTITIES	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEET	
D:\11files\110015\05 Plans\Current\SH_Summary_11015.dgn		DRAWN - EBB	REVISED -			1598	11-00218-00-BR	ADAMS	53	3
PLOT SCALE = 20.0000' / in.		CHECKED - SRW	REVISED -			CONTRACT NO. 939				
PLOT DATE = 1/30/2013		DATE - 6-21-12	REVISED -			SCALE: NONE	SHEET NO. 1 OF 4 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT

SUMMARY OF QUANTITIES						
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				0005 ROADWAY	0011 STRUCTURE	0042 TRAINERS
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1.5	1.5		
40600300	AGGREGATE (PRIME COAT)	TON	3	3		
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	22	22		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	166	166		
40600990	TEMPORARY RAMP	SQ YD	23	23		
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	204	204		
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	97	97		
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	20	20		
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	101	101		
44000100	PAVEMENT REMOVAL	SQ YD	228	228		
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	96	96		
44004250	PAVED SHOULDER REMOVAL	SQ YD	73	73		
48101200	AGGREGATE SHOULDERS, TYPE B	TON	95	95		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1	
50105220	PIPE CULVERT REMOVAL	FOOT	80	80		
50157300	PROTECTIVE SHIELD	SQ YD	78		78	
50200100	STRUCTURE EXCAVATION	CU YD	430		430	
50300100	FLOOR DRAINS	EACH	12		12	
50300225	CONCRETE STRUCTURES	CU YD	250.4		250.4	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	361.8		361.8	
50300260	BRIDGE DECK GROOVING	SQ YD	944		944	
50300300	PROTECTIVE COAT	SQ YD	1172		1172	

• SPECIAL PROVISION

FILE NAME : G:\111\files\110015\05 Plans\Current\SH_Summary_11015.dgn	USER NAME : EgJ	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 /CANNONBALL ROAD) SUMMARY OF QUANTITIES	F.A.S. RTE. 1598	SECTION 11-00218-00-BR	COUNTY ADAMS	TOTAL SHEETS 53	SHEET NO. 4		
PLOT SCALE = 20,000' / 1" = 1'	CHECKED - SRW	DATE - 6-21-12	REVISED -			SCALE:	SHEET NO. 2 OF 4 SHEETS	STA.	TO STA.	CONTRACT NO. 1598-00		
PLOT DATE = 1/30/2013	DATE -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT						

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				0005 ROADWAY	0011 STRUCTURE	0042 TRAINEES
• 50500305	ERECTING STRUCTURAL STEEL	L SUM	1		1	
50500505	STUD SHEAR CONNECTORS	EACH	4032		4032	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	109730		109730	
50800515	BAR SPLICERS	EACH	84		84	
50800530	MECHANICAL SPLICERS	EACH	248		248	
Δ 50901730	BRIDGE FENCE RAILING	FOOT	370		370	
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	897		897	
51200958	FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	574		574	
51202305	DRIVING PILES	FOOT	1471		1471	
51203200	TEST PILE METAL SHELLS	EACH	4		4	
51500100	NAME PLATES	EACH	1		1	
• 52100210	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12		12	
52100520	ANCHOR BOLTS, 1"	EACH	24		24	
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24		24	
• 542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	86	86		
• 542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	46	46		
54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	2	2		
550A0410	STORM SEWERS, CLASS A, TYPE 2 24"	FOOT	154	154		
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	60		60	
60220005	MANHOLES, TYPE A, 4' -DIAMETER, WITH MEDIAN INLET (604101)	EACH	1	1		
60221100	MANHOLES, TYPE A, 5' -DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
Δ 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	125	125		

• SPECIAL PROVISION

Δ SPECIALTY ITEMS

FILE NAME *	USER NAME = bgj	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 /CANNONBALL ROAD) SUMMARY OF QUANTITIES	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 1/30/2013		DATE - 6-21-12	REVISED -			SCALE:	SHEET NO. 3 OF 4 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE		
				0005 ROADWAY	0011 STRUCTURE	0042 TRAINEES
Δ 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
Δ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3	3		
Δ 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1	1		
67100100	MOBILIZATION	L SUM	1	1		
Δ 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	850	850		
Δ 78200410	GUARDRAIL MARKERS, TYPE A	EACH	9	9		
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
* Z0013798	CONSTRUCTION LAYOUT	L SUM	1		1	
* Z0018800	DRAINAGE SYSTEM	L SUM	1		1	
* Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	144		144	
* Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1		1	
* X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	102		102	
* X4811300	AGGREGATE SHOULDERS, TYPE B (SPECIAL)	TON	186	186		
* X7010222	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21 (SPECIAL)	L SUM	1	1		
* Z0076600	TRAINEES	HOUR	500			500
* Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500			500

* SPECIAL PROVISION
 Δ SPECIALTY ITEM

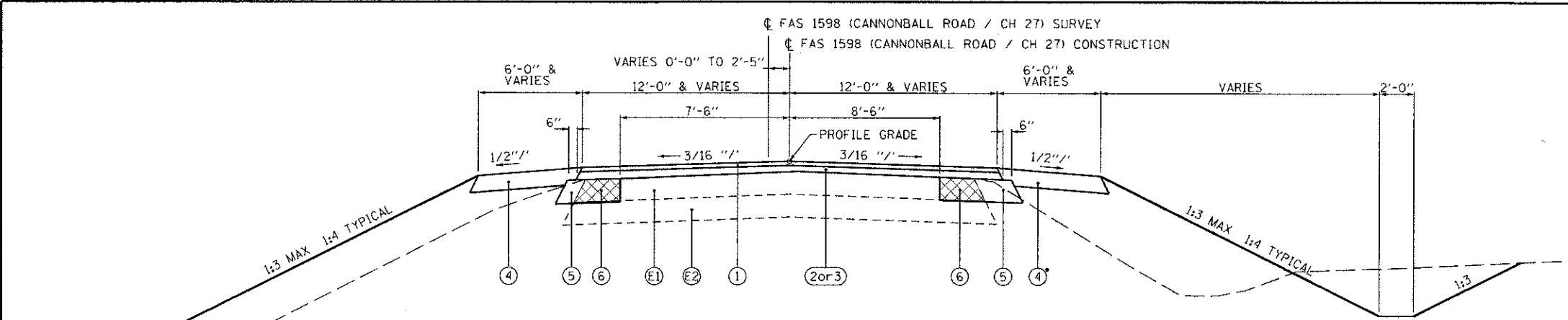
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 PLOT DATE = 1/30/2013

DESIGNED - SEB
 DRAWN - EBB
 CHECKED - SRW
 DATE - 6-21-12
 REVISED - SEB - 1/16/13
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 REVISED -

ADAMS COUNTY
 HIGHWAY DEPARTMENT

FAS 1598 (CH 27 /CANNONBALL ROAD)
 SUMMARY OF QUANTITIES
 SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

F.A.S. RTE. 1598	SECTION 11-00218-00-BR	COUNTY ADAMS	TOTAL SHEETS 53	SHEET NO. 6
CONTRACT NO. 9			ILLINOIS FED. AID PROJECT	



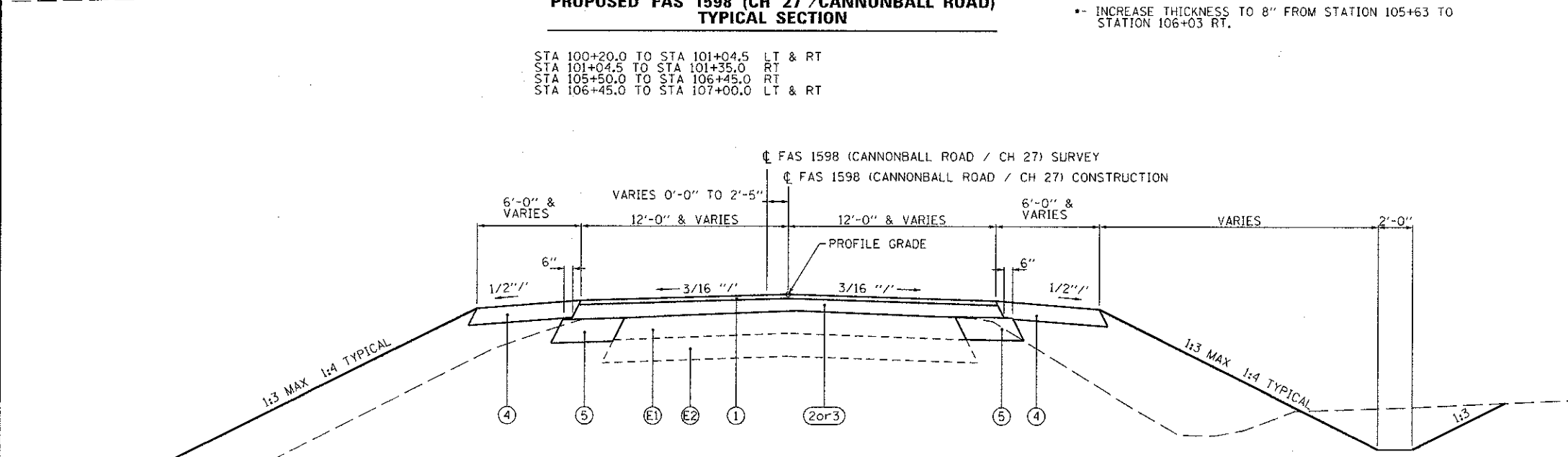
**PROPOSED FAS 1598 (CH 27 /CANNONBALL ROAD)
TYPICAL SECTION**

STA 100+20.0 TO STA 101+04.5 LT & RT
 STA 101+04.5 TO STA 101+35.0 RT
 STA 105+50.0 TO STA 106+45.0 RT
 STA 106+45.0 TO STA 107+00.0 LT & RT

*- INCREASE THICKNESS TO 8" FROM STATION 105+63 TO STATION 106+03 RT.

LEGEND

- ① HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 1 1/2"
- ② LEVELING BINDER (MACHINE METHOD), N50, VARIABLE DEPTH (2 1/4" MAX)
- ③ HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH (2 1/4" MIN)
- ④g HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 5 1/2"
- ④ AGGREGATE SHOULDERS, TYPE B 6"
- ④g AGGREGATE SHOULDERS, TYPE B (SPECIAL) 6"
- ⑤ BASE COURSE WIDENING 8"
- ⑥ PAVEMENT REMOVAL
- ⑦ SUBBASE GRANULAR MATERIAL, TYPE B, 8"
- ⑦g SUBBASE GRANULAR MATERIAL, TYPE B, VARIABLE DEPTH (4" MIN)
- ⑧ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS
- ⑨ AGGREGATE SURFACE COURSE, TYPE A 8"
- E1 EXISTING HMA PAVEMENT (8" & VARIES)
- E2 EXISTING AGGREGATE BASE

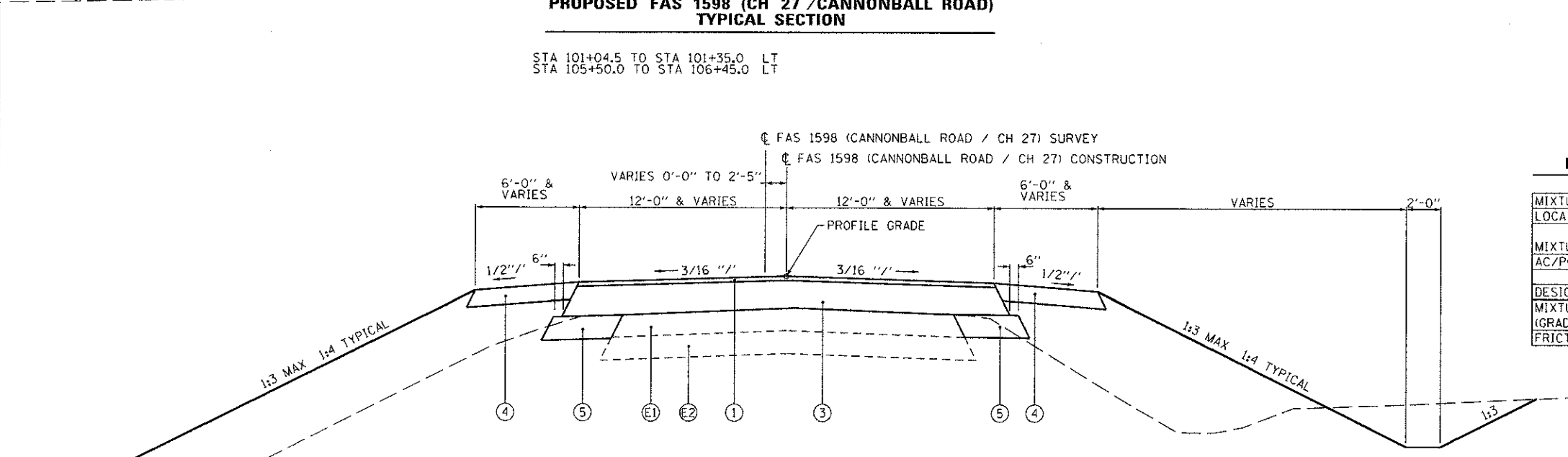


**PROPOSED FAS 1598 (CH 27 /CANNONBALL ROAD)
TYPICAL SECTION**

STA 101+04.5 TO STA 101+35.0 LT
 STA 105+50.0 TO STA 106+45.0 LT

PAVEMENT DESIGN

DESIGN PERIOD = 20 YEARS
 STRUCTURAL DESIGN ADT = 1160
 DESIGN TRAFFIC:
 PV = 1021 (88%) SU = 81 (7%) MU = 58 (5%)
 CLASS III ROAD
 TF = 0.313
 PROVIDE:
 7" HOT-MIX ASPHALT PAVEMENT
 8" SUBBASE GRANULAR MATERIAL, TYPE B

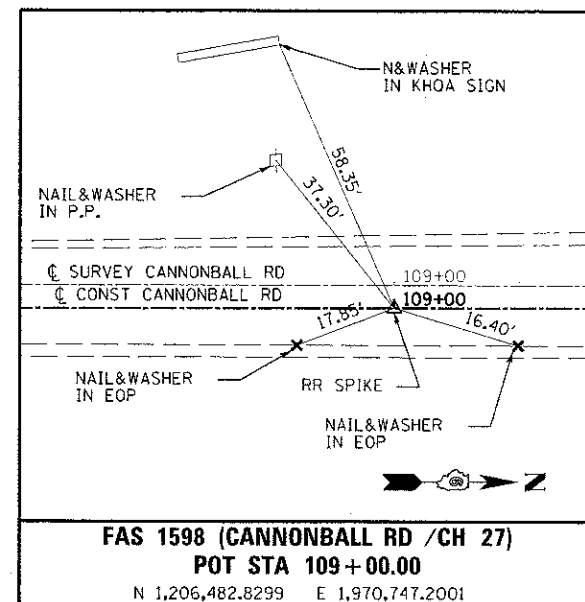
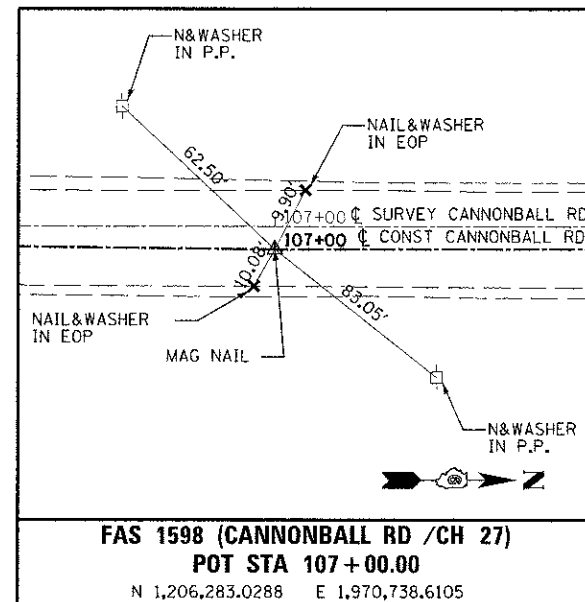
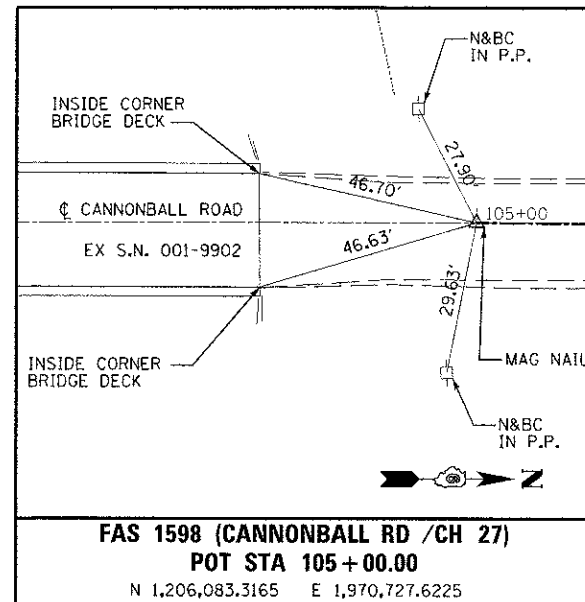
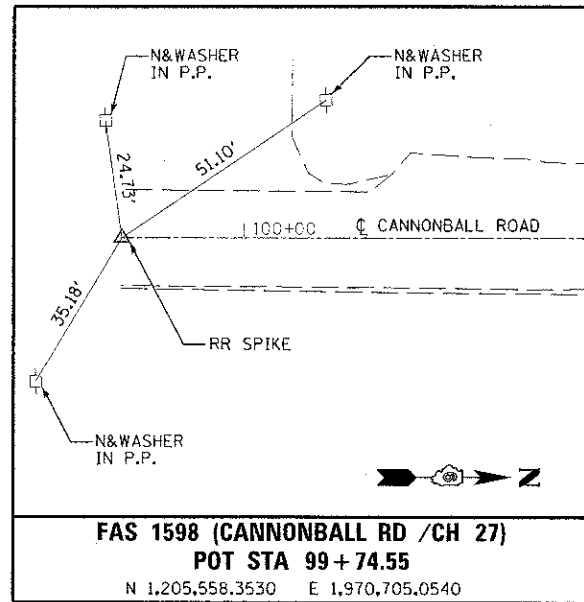


**PROPOSED FAS 1598 (CH 27 /CANNONBALL ROAD)
TYPICAL SECTION**

STA 101+35.0 TO STA 101+60.0
 STA 105+20.0 TO STA 105+50.0

MIXTURE REQUIREMENTS

MIXTURE NUMBER:	1	2	3
LOCATIONS:	FAS 1598	FAS 1598	FAS 1598
MIXTURE USES:	HOT-MIX ASPHALT SURFACE COURSE	HMA BINDER, BASE CSE WIDENING, PATCHING	LEVEL BINDER
AC/PG:	PG64-22	PG64-22	PG64-22
DESIGN AIR VOIDS:	4% @ N DESIGN = 50	4% @ N DESIGN = 50	4% @ N DESIGN = 50
MIXTURE COMPOSITION (GRADATION MIXTURE):	IL 9.5	IL 19.0	IL 9.5
FRICITION AGGREGATE:	MIX "C"	N/A	N/A



FILE NAME =	USER NAME = bgj	DESIGNED - SEB	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 /CANNONBALL ROAD) HORIZONTAL CONTROL TIES	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\11\files\110015\25 Plans\Current\SH_A1\	105_11015.dgn	DRAWN - EBB	REVISED -			1598	11-00218-00-BR	ADAMS	53	9	
PLOT SCALE = 40,0000' / IN.	CHECKED - SRW	REVISED -	REVISED -			CONTRACT NO. 93500					
PLOT DATE = 11/5/2012	DATE - 6-21-12	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: NONE	SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.		

ROADWAY PAVING SCHEDULE

LOCATION STATION TO STATION	SIDE	SURFACE WIDTH	LEVELING BINDER N50	HMA BINDER COURSE IL-19.0, N50	HMA SURFACE COURSE MIX "C", N50
FAS 1598 (CANNONBALL ROAD)					
100+20.0	100+60.0	LT & RT	24.0		9.0
100+60.0	101+00.0	LT & RT	24.0	6.4	9.0
101+00.0	102+42.8	LT & RT	24.0	125.6	31.9
104+92.8	105+80.0	LT & RT	24.0	78.1	19.5
105+80.0	106+70.0	LT & RT	24.0	14.8	20.2
106+70.0	107+00.0	LT & RT	24.0		6.7
TOTALS			21.2	203.8	96.3
USE			22	204	97

ROADWAY WIDENING SCHEDULE

STATION TO STATION	SIDE	BASE COURSE WIDENING 8"	SUBBASE GRANULAR MATERIAL TY B
		SQ YD	TON
FAS 1598 (CANNONBALL ROAD)			
100+20.0	101+60.0	LT	66.9
101+60.0	102+39.0	LT	20.1
100+20.0	101+60.0	RT	59.1
101+60.0	102+47.0	RT	15.9
104+89.0	105+20.0	LT	9.0
105+20.0	107+00.0	LT	80.0
104+97.0	105+20.0	RT	3.3
105+20.0	107+00.0	RT	82.0
TOTAL		288.0	47.8
USE		288	48

AGGREGATE SHOULDERS SCHEDULE

STATION TO STATION	SIDE	AGG SHLD TY B	AGG SHLD TY B (SPECIAL)
		TON	
FAS 1598 (CANNONBALL ROAD)			
100+20.0	100+28.6	LT	0.7
100+65.7	101+66.2	LT	21.5
101+66.2	102+65.4	LT	30.6
100+20.0	100+91.0	RT	13.5
101+17.9	102+80.2	RT	64.4
104+70.2	105+63.0	RT	30.6
105+63.0	107+00.0	RT	43.6
104+55.6	106+32.3	LT	59.6
106+32.3	107+00.0	LT	15.4
TOTAL		94.7	185.2
USE		95	186

MISCELLANEOUS PAVING ITEMS SCHEDULE

ITEM	UNIT	TOTAL
TEMPORARY RAMP	SO YD	23
AGGREGATE FOR TEMPORARY ACCESS	TON	50
BITUMINOUS MATERIALS (PRIME COAT)	TON	1.5
AGGREGATE (PRIME COAT)	TON	3

THE SCHEDULE FOR MISCELLANEOUS PAVING ITEMS ARE ESTIMATED QUANTITIES. IT MAY BE REDUCED, INCREASED, OR DELETED BY THE ENGINEER BASED ON ACTUAL FIELD CONDITIONS. NO WORK INVOLVING THESE ESTIMATED QUANTITIES SHALL BE PERFORMED WITHOUT THE DIRECTION AND APPROVAL OF THE ENGINEER.

SUBBASE GRANULAR MATERIAL, TYPE B

STATION TO STATION	SIDE	TON
FAS 1598 (CANNONBALL ROAD)		
101+60.0	102+42.9	LT & RT
104+92.8	105+20.0	LT & RT
TOTAL		177.7
USE		178

HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

STATION TO STATION	SIDE	WIDTH	SQ YD
FAS 1598 (CANNONBALL ROAD)			
100+20.0	100+60.0	LT & RT	21.5
106+70.0	107+00.0	LT & RT	21.0
TOTAL			165.6
USE			166

PAINT PAVEMENT MARKING - LINE 5"

STATION TO STATION	SIDE	DESCRIPTION	YELLOW FOOT
FAS 1598 (CANNONBALL ROAD)			
100+20.0	107+00.0	LT CL NO-PASSING	680.0
100+20.0	107+00.0	RT CL SKIP-DASH	170.0
TOTAL			850.0
USE			850

DRAINAGE SCHEDULE

STATION	SIDE	PLAN LABEL	PIPE CULVERTS		PRE FLRD	STORM	MANHOLES, TY A		TRENCH
			CLASS D TYPE 1	CLASS D TYPE 1	CONC END SECTION	SEWERS CL A	4' Ø MED INLET	5' Ø TY 1 FR CLSD LID	BACKFILL
			15" FOOT	18" FOOT	24" EACH	TY 2, 24" FOOT	604101 EACH	CLSD LID EACH	CU YD
FAS 1598 (CANNONBALL ROAD)									
101+27.0	RT	1	86						
	LT	2			1	24			
104+65.3	LT	3						1	
104+73.0	CL	4			1	50			72
	LT	5				80			
105+48.9	LT	6		46				1	
105+83.0	RT	7							
TOTALS			86	46	2	154	1	1	72
USE			86	46	2	154	1	1	72

PAVEMENT REMOVAL

STATION TO STATION	SIDE	WIDTH	SQ YD
FAS 1598 (CANNONBALL ROAD)			
100+20.0	101+04.5	LT	2
100+20.0	101+35.0	RT	2
102+71.9	103+00.5	LT & RT	21-24
104+54.8	104+79.2	LT & RT	22-24
105+50.0	107+00.0	RT	2-3
106+45.0	107+00.0	LT	2
TOTAL			227.2
USE			228

PAVED SHOULDER REMOVAL

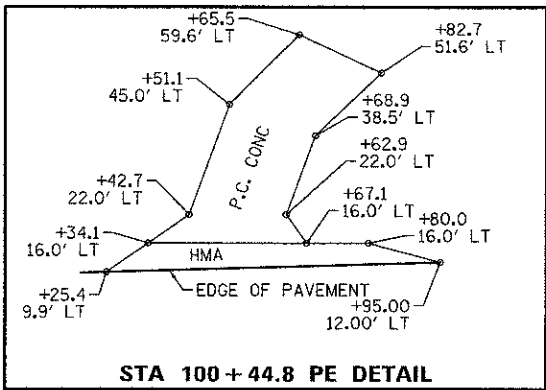
STATION TO STATION	SIDE	WIDTH	SQ YD
FAS 1598 (CANNONBALL ROAD)			
100+26.3	101+04.5	LT	6
102+40.3	102+86.0	RT	4-6
TOTAL			72.1
USE			73

PIPE CULVERT REMOVAL

STATION	SIDE	DESCRIPTION	FOOT
FAS 1598 (CANNONBALL ROAD)			
104+69	LT & RT	24" CMP	54
104+74	LT	18" CMP	26
TOTAL			80

DRIVEWAY PAVEMENT REMOVAL

STATION	SIDE	TYPE	SQ YD
FAS 1598 (CANNONBALL ROAD)			
100+44.8	LT	CONC	95.9
TOTAL			95.9
USE			96

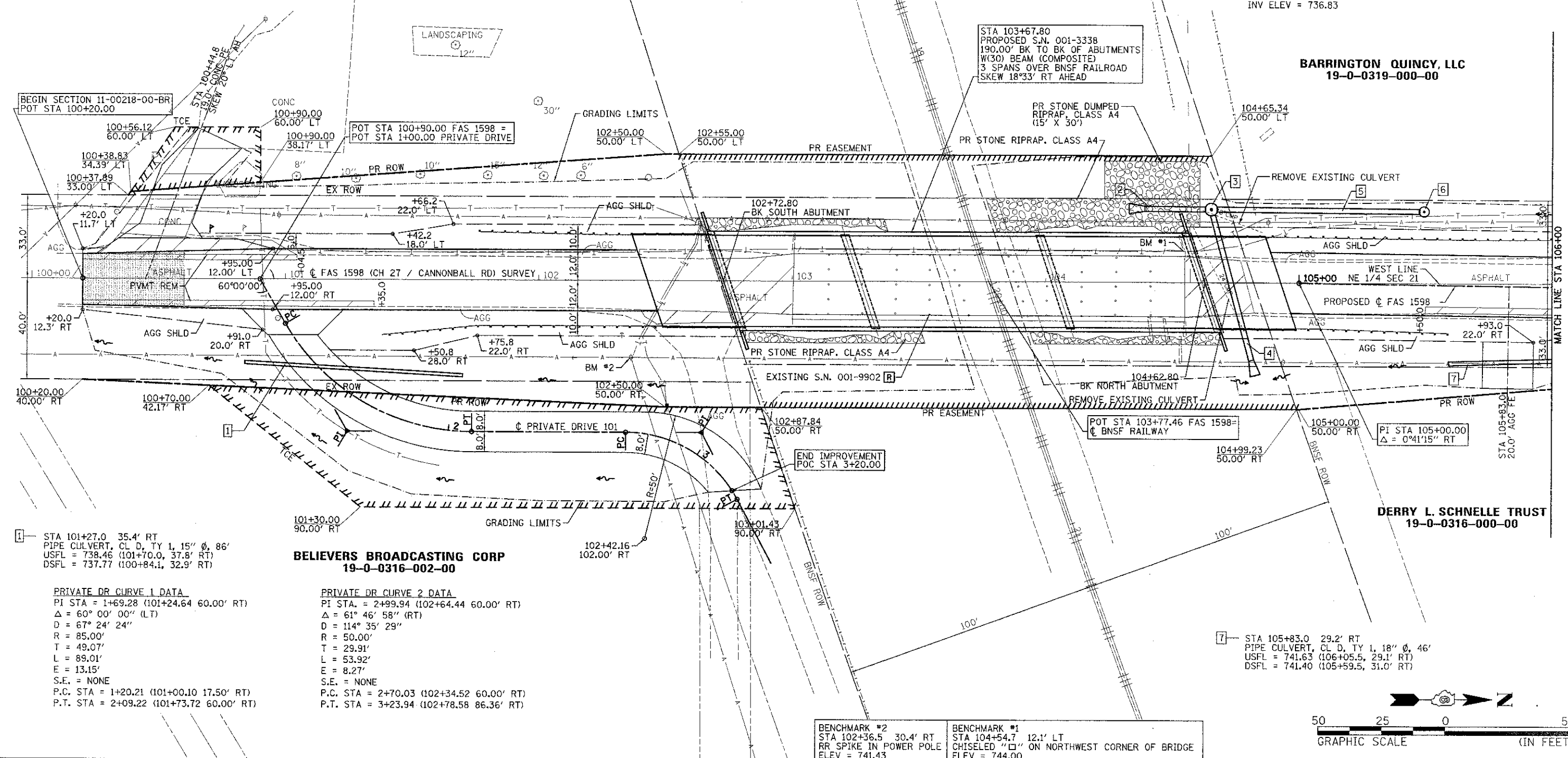


- 2- STORM SEWERS, CLASS A, TYPE 2 24", 24'
SLOPE = 2.1%
USFL = 734.50 (104+63.0, 28.9' LT)
DSFL = 734.00 (104+39.0, 29.1' LT)
CONC FLARED END SECTION (STD 542301), 24", 1 EACH
- 3- MANHOLE, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID, 1 EACH
STA 104+65.3 28.9' LT
TOP OF LID ELEV. = 743.40
INV ELEV = 733.90
- 4- STORM SEWERS, CLASS A, TYPE 2 24", 50'
SLOPE = 4.3%
USFL = 739.43 (104+81.2, 30.7' RT)
DSFL = 736.00 (104+65.9, 26.7' LT)
TRENCH BACKFILL, 72.0 CU YD
CONC FLARED END SECTION (STD 542301), 24", 1 EACH
- 5- STORM SEWERS, CLASS A, TYPE 2 24", 80'
SLOPE = 1.4%
USFL = 737.10 (105+47.2, 29.0' LT)
DSFL = 736.00 (104+67.6, 28.9' LT)
- 6- MANHOLE, TYPE A, 4'-DIAMETER, WITH MEDIAN INLET (604101), 1 EACH
STA 105+48.9, 29.0' LT
TOP OF GRATE ELEV = 741.95
INV ELEV = 736.83

EICHHORN, KEVIN GALE & BONNIE JEAN
19-0-0318-000-00

BURLINGTON NORTHERN SANTA FE RAILROAD COMPANY

BARRINGTON QUINCY, LLC
19-0-0319-000-00

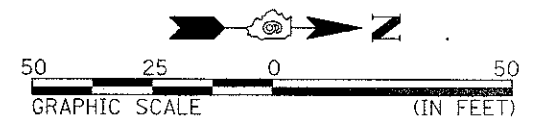


1- STA 101+27.0 35.4' RT
PIPE CULVERT, CL D, TY 1, 15" ϕ , 86'
USFL = 738.46 (101+70.0, 37.8' RT)
DSFL = 737.77 (100+84.1, 32.9' RT)

BELIEVERS BROADCASTING CORP
19-0-0316-002-00

DERRY L. SCHNELLE TRUST
19-0-0316-000-00

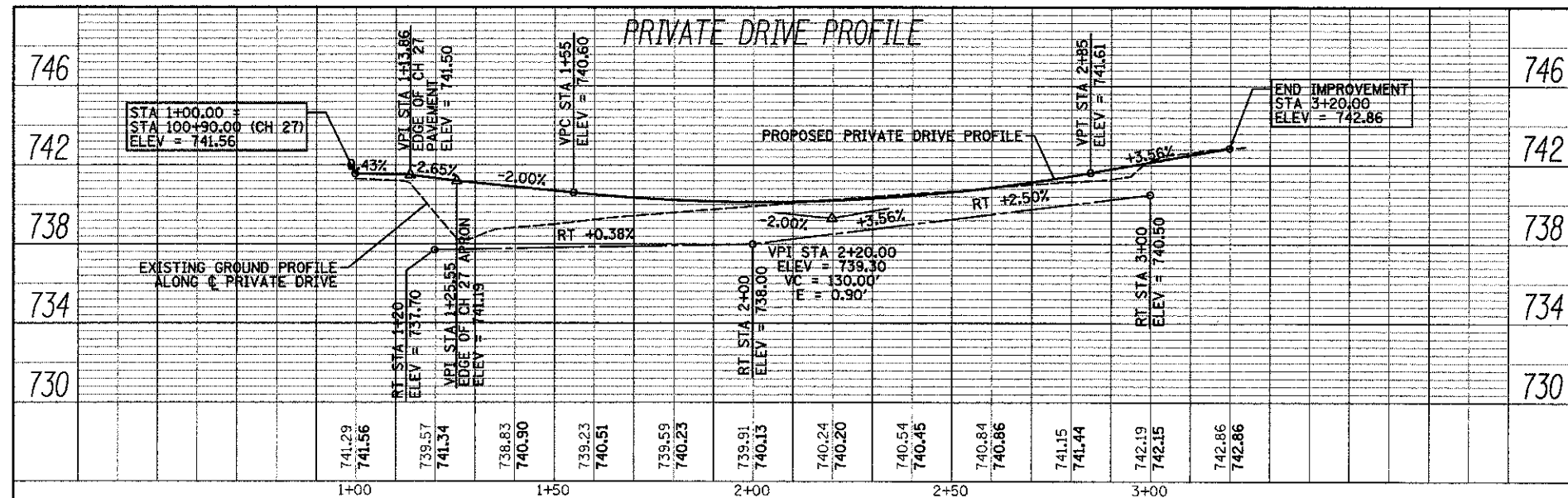
7- STA 105+83.0 29.2' RT
PIPE CULVERT, CL D, TY 1, 18" ϕ , 46'
USFL = 741.63 (106+05.5, 29.1' RT)
DSFL = 741.40 (105+59.5, 31.0' RT)



FILE NAME =	USER NAME = seeb	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 / CANNONBALL ROAD) PLAN	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	
Gr:\files\110215\05 Plans\Current\SH-LPFB	110215.dgn	DRAWN - EBB	REVISED -			1598	11-00218-00-BR	ADAMS	53	12
		CHECKED - SRW	REVISED -			CONTRACT NO. 93590				
		DATE - 6-21-12	REVISED -			ILLINOIS FED. AID PROJECT				
		PLOT SCALE = 20,0000' / in.		SCALE: 1"=50'	SHEET NO. 1 OF 4 SHEETS	STA. 100+00 TO STA. 106+00				

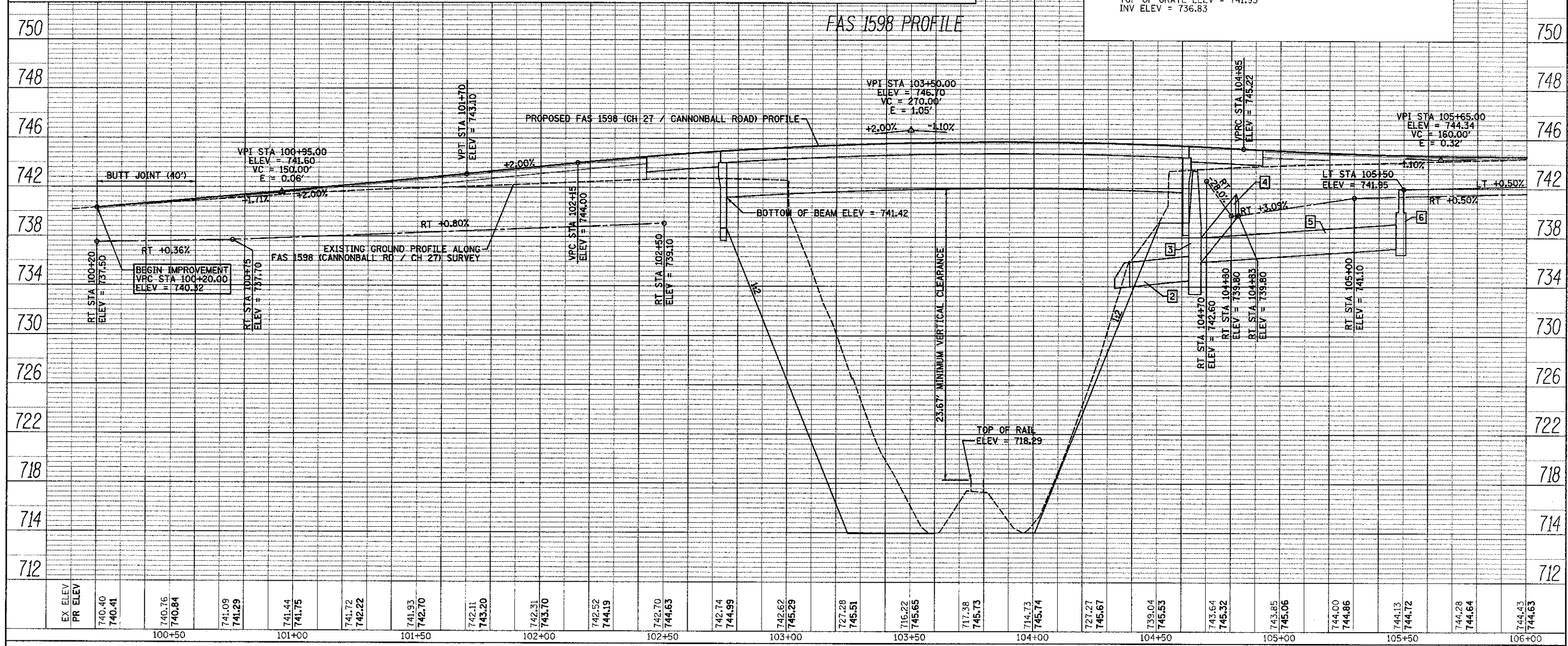
PLAN	DATE
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DATE	
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DATE	

PROFILE	DATE
NO.	
BY	
DATE	
NO.	
BY	
DATE	
NO.	
BY	
DATE	



BENCHMARK #2	BENCHMARK #1
STA 102+36.5 30.4' RT	STA 104+54.7 12.1' LT
RR SPIKE IN POWER POLE	CHISELED "□" ON NORTHWEST CORNER OF BRIDGE
ELEV = 741.43	ELEV = 744.00

- 2- STORM SEWERS, CLASS A, TYPE 2 24", 24' SLOPE = 2.1% USFL = 734.50 (104+63.0, 28.9' LT) DSFL = 734.00 (104+39.0, 29.1' LT) CONC FLARED END SECTION (STD 542301), 24", 1 EACH
- 3- MANHOLE, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID, 1 EACH STA 104+65.3 28.9' LT TOP OF LID ELEV = 743.40 INV ELEV = 733.90
- 4- STORM SEWERS, CLASS A, TYPE 2 24", 50' SLOPE = 4.3% USFL = 739.43 (104+81.2, 30.7' RT) DSFL = 736.00 (104+65.9, 26.7' LT) TRENCH BACKFILL, 72.0 CU YD CONC FLARED END SECTION (STD 542301), 24", 1 EACH
- 5- STORM SEWERS, CLASS A, TYPE 2 24", 80' SLOPE = 1.4% USFL = 737.10 (105+47.2, 29.0' LT) DSFL = 736.00 (104+67.6, 28.9' LT)
- 6- MANHOLE, TYPE A, 4'-DIAMETER, WITH MEDIAN INLET (604101), 1 EACH STA 105+48.9 29.0' LT TOP OF GRATE ELEV = 741.95 INV ELEV = 736.83



FILE NAME =	USER NAME = seb	DESIGNED - SEB	REVISED - SEB - 1/16/13
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		CHECKED - SRW	REVISED -
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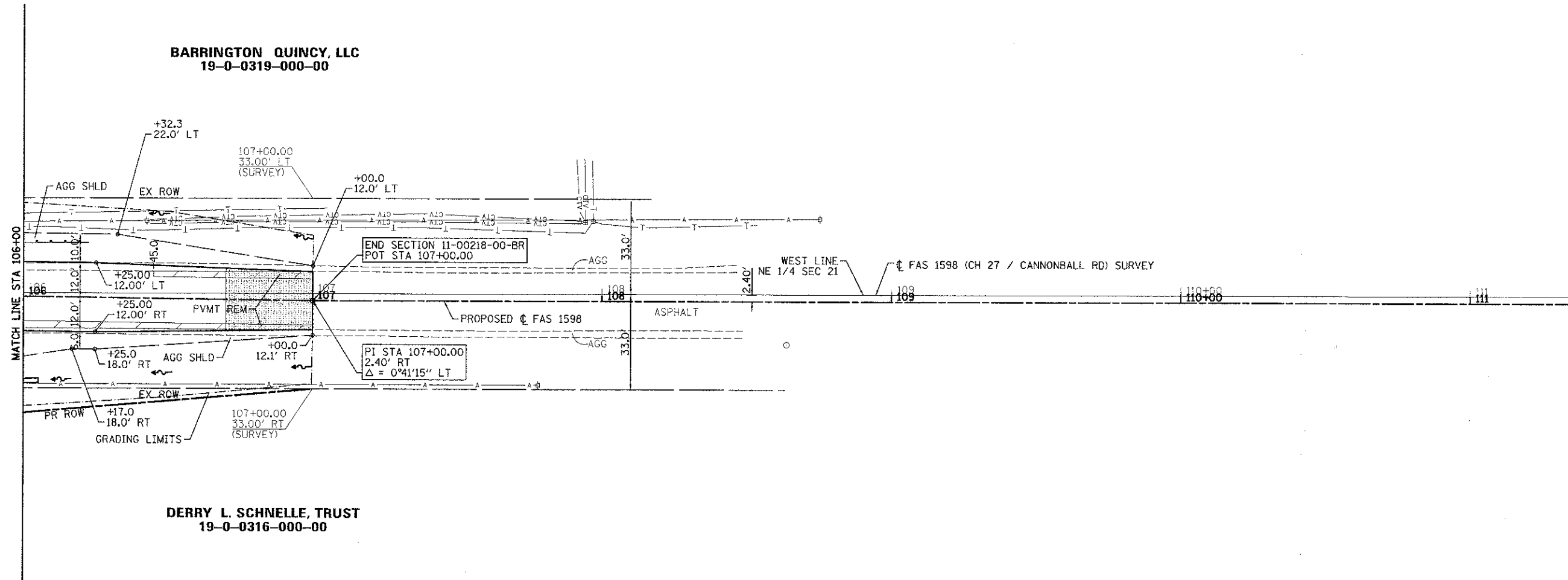
**ADAMS COUNTY
HIGHWAY DEPARTMENT**

**FAS 1598 (CH 27 / CANNONBALL ROAD)
PROFILE**

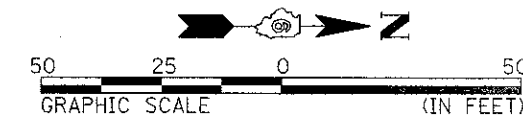
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1598	11-00218-00-BR	ADAMS	53	13
				CONTRACT NO. 93590
ILLINOIS FED. AID PROJECT				

BARRINGTON QUINCY, LLC
19-0-0319-000-00



DERRY L. SCHNELLE, TRUST
19-0-0316-000-00



FILE NAME = D:\files\10215\05 Plans\Current\SHLPP0	USER NAME = seb 2.11015.dgn	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 / CANNONBALL ROAD) PLAN				F.A.S. RTE. 1598	SECTION 11-00218-00-BR	COUNTY ADAMS	TOTAL SHEETS 53	SHEET NO. 14
	PLOT SCALE = 20,0000' / in.	CHECKED - SRW	REVISED -		SCALE: 1"=50'	SHEET NO. 3 OF 4 SHEETS	STA. 106+00	TO STA. 111+00	CONTRACT NO. 9590				
	PLOT DATE = 1/17/2013	DATE - 6-21-12	REVISED -		ILLINOIS FED. AID PROJECT								

GENERAL NOTES

- 1) FLAGS SHALL BE USED AT EACH DETOUR SIGN LOCATION.
- 2) ROAD CLOSURE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD BLR-21 ALONG WITH THE DETAILS AND SPECIAL PROVISIONS.
- 3) ALL SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED BY THE CONTRACTOR.
- 4) THE LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
- 5) ALL SIGNS SHALL BE REMOVED WHEN NOT REQUIRED FOR FUTURE USE.
- 6) THIS TRAFFIC CONTROL AND PROTECTION SHALL BE PAID FOR ACCORDING TO THE CONTRACT UNIT COST PER LUMP SUM FOR TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21 (SPECIAL).
- 7) THE EXACT LOCATIONS OF ALL TRAFFIC CONTROL ITEMS SHALL BE APPROVED BY THE ENGINEER.
- 8) PRIOR TO THE CLOSURE OF CANNONBALL ROAD, THE CONTRACTOR SHALL NOTIFY LOCAL EMERGENCY SERVICES, ADAMS COUNTY ENGINEER, THE TOWNSHIP ROAD COMMISSIONER, US POSTAL SERVICE, AND QUINCY PUBLIC SCHOOL DISTRICT.

ADAMS COUNTY ENGINEER:

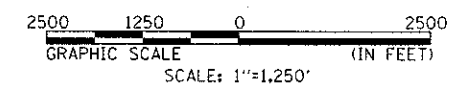
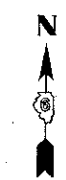
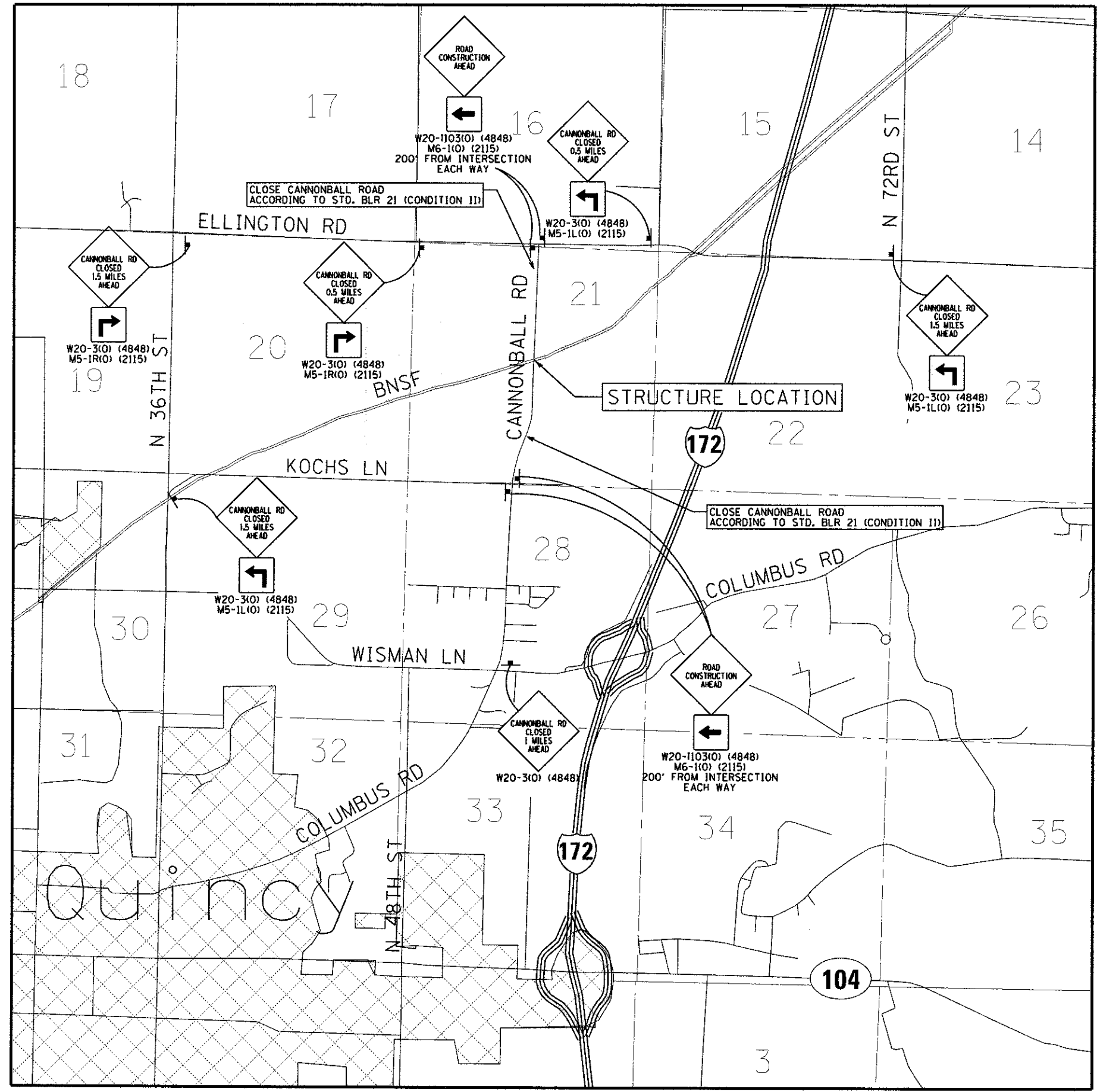
MR. JAMES R. FRANKENHOFF, P.E.
 101 NORTH 54TH STREET
 QUINCY, IL 62305-3797
 FAX: 217-223-0614
 PHONE: 217-223-9418
 E-MAIL: ACHD@ADAMS.NET

ELLINGTON TOWNSHIP COMMISSIONER:

MR. RICHARD J. OBERT
 6130 HORSESHOE VALLEY RD.
 QUINCY, IL 62305
 PHONE: 217-223-9692

QUINCY PUBLIC SCHOOL DISTRICT:

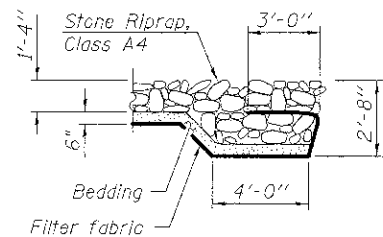
DIRECTOR OF TRANSPORTATION
 121 NORTH 20TH
 QUINCY, IL 62301
 PHONE: 217-228-7146



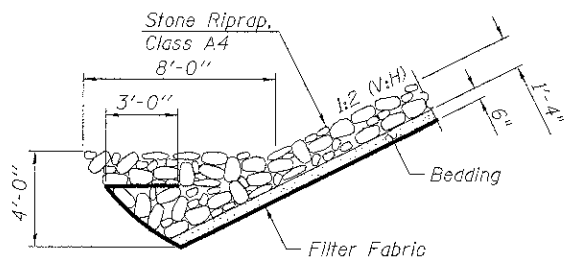
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SCALE: 1"=1250'				SHEET NO. 1 OF 1 SHEETS STA. TO STA.								

GENERAL NOTES

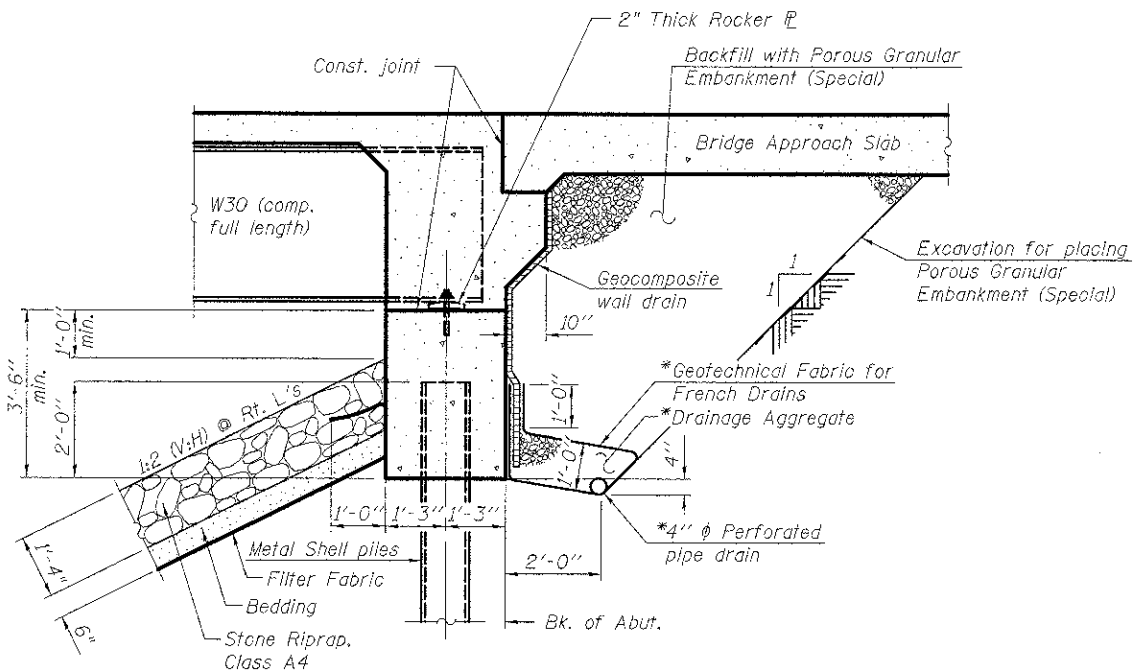
Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4 in. φ, holes 13/16 in. φ, unless otherwise noted.
 Calculated weight of M270 Grade 36 Structural Steel = 15,080 Pounds.
 Calculated weight of M270 Grade 50 Structural Steel = 140,650 Pounds.
 Structural steel for the beams shall be AASHTO M 270 Grade 50.
 Structural steel for the diaphragms shall be AASHTO M 270 Grade 36 minimum.
 No field welding is permitted except as specified in the contract documents.
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
 Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Contractor shall drive test piles to 110% of the nominal required bearing specified, in production locations as directed by the Engineer, prior to ordering.



SECTION A-A



SECTION B-B



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures, 4"

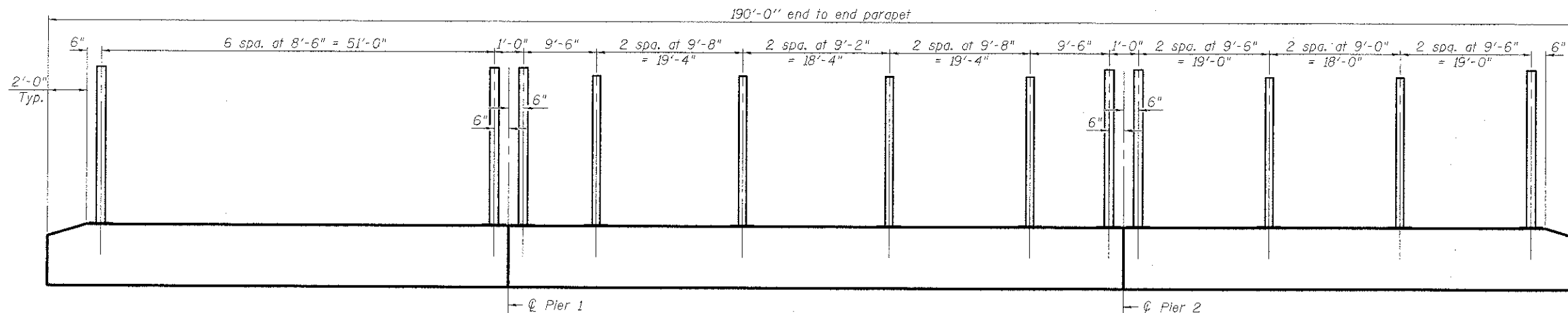
Note:
 All drainage system components shall extend 2'-0" beyond the end of each wingwall, except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 6010II).

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		102	102
Stone Riprap, Class A4	Ton		973	973
Removal of Existing Structures	Each			1
Protective Shield	Sq. Yd.	78		78
Structure Excavation	Cu. Yd.		430	430
Floor Drains	Each	12		12
Concrete Structures	Cu. Yd.	250.4		250.4
Concrete Superstructure	Cu. Yd.	361.8		361.8
Bridge Deck Grooving	Sq. Yd.	944		944
Protective Coat	Sq. Yd.	1,172		1,172
Erecting Structural Steel	L. Sum		1	1
Stud Shear Connectors	Each	4,032		4,032
Reinforcement Bars, Epoxy Coated	Pound	83,110	26,620	109,730
Bar Splicers	Each	84		84
Mechanical Splicers	Each		248	248
Bridge Fence Railing	Foot	370		370
Furnishing Metal Shell Piles, 12"x0.250"	Foot		897	897
Furnishing Metal Shell Piles, 14"x0.250"	Foot		574	574
Driving Piles	Foot		1,471	1,471
Test Pile Metal Shells	Each		4	4
Name Plates	Each	1		1
Erecting Elastomeric Bearing Assembly, Type I	Each	12		12
Anchor Bolts, 1"	Each		24	24
Anchor Bolts, 1/4"	Each		24	24
Geocomposite Wall Drain	Sq. Yd.		60	60
Pipe Underdrains for Structures 4"	Foot		144	144
Railroad Protective Liability Insurance	L. Sum			1
Drainage System	L. Sum	1		1

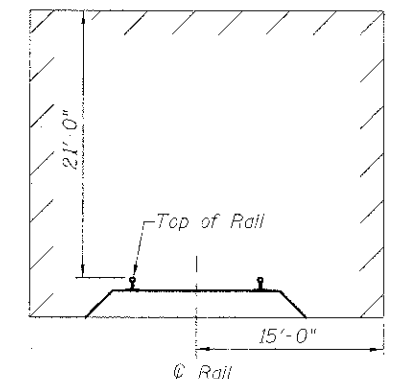
RAILROAD GENERAL NOTES

Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring.
 All demolition within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall comply with the Railroad's Demolition Requirements.
 Erection over the Railroad's tracks shall be planned such that it enables the track to remain open to traffic per Railroad requirements.
 The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
 The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures.
 The Contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad prior to beginning any grading on the project site. Cost included with Polypropylene Tied Concrete Block Mat Slopewall (Flexamat).
 Temporary Construction Clearances, including falsework clearances, shall comply with the Minimum Construction Clearance shown below.
 All permanent clearances shall be verified before project closeout.



BRIDGE FENCE POST SPACING

(See Sheet 13 of 29 for fence details)

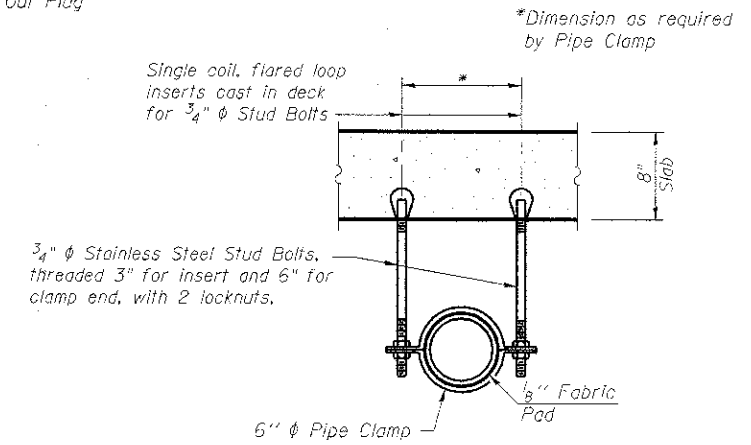
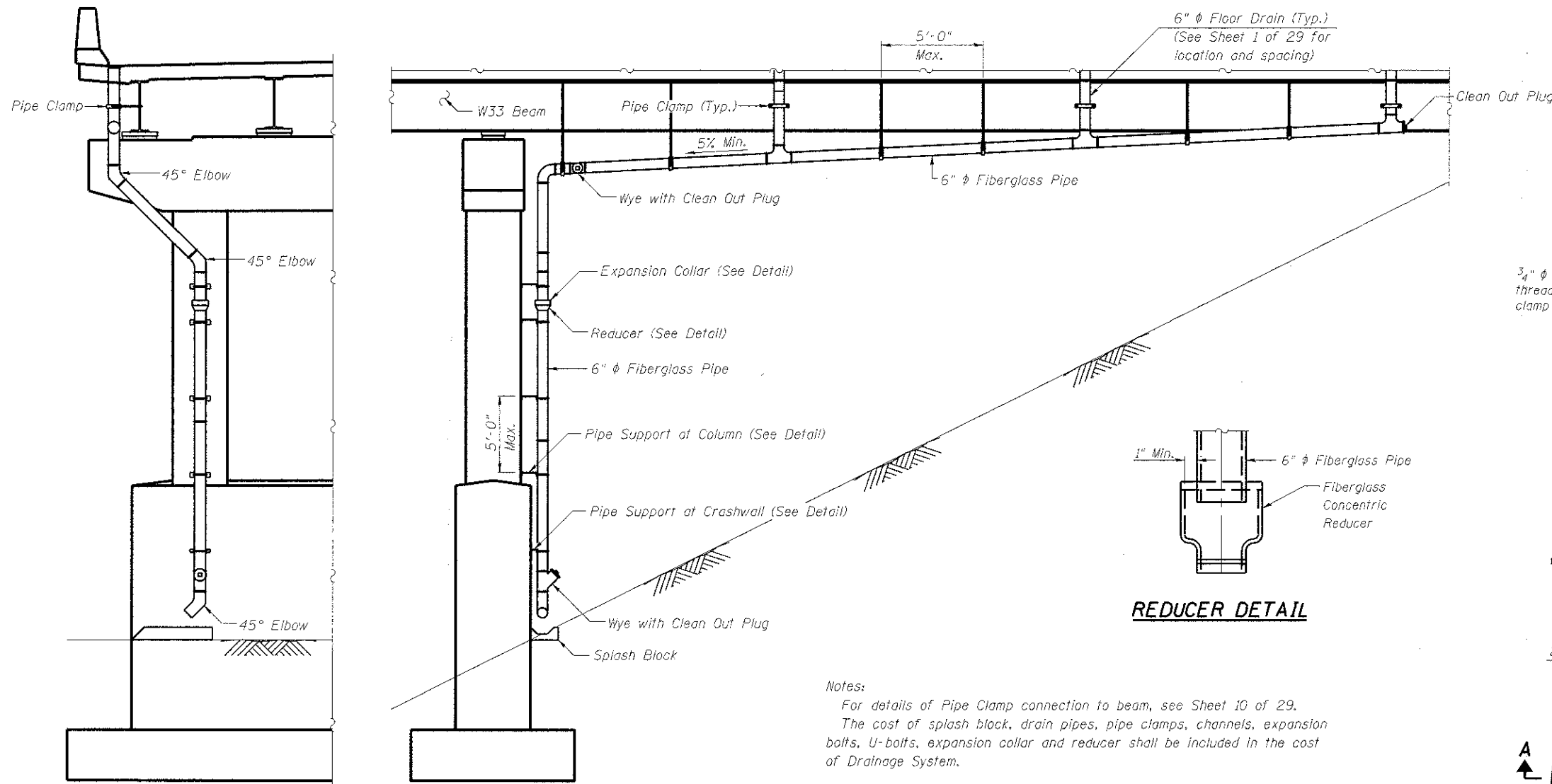


MINIMUM CONSTRUCTION CLEARANCE

Note: (Perpendicular to Railroad)

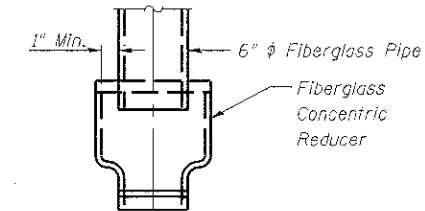
No construction activities or other obstructions shall be placed within these limits during construction.

FILE NAME =	USER NAME = seb	DESIGNED - ADL	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	GENERAL DATA S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Q:\11\10015\05 Plans\Bridge Plans\GPE & General Details	CHECKED - RJP	REVISED -	REVISED -			1598	11-00218-00-BR	ADAMS	53	18	
PLOT SCALE = 6.883333' / in.	DRAWN - RJP	REVISED -	REVISED -			CONTRACT NO. 93590					
PLOT DATE = 1/17/2013	CHECKED - ADL	REVISED -	REVISED -			SHEET NO. 2 OF 29 SHEETS					



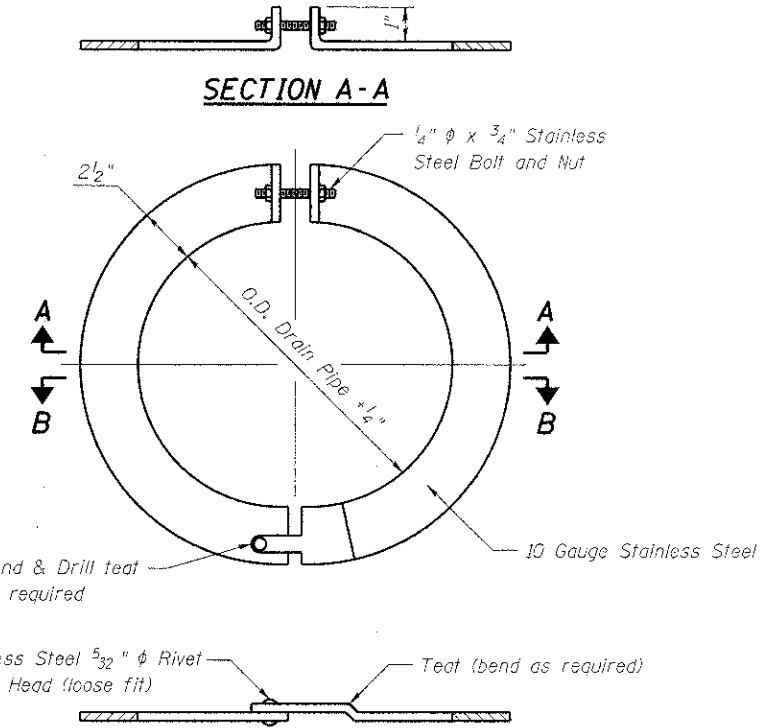
PIPE CLAMP DETAIL

Note: Galvanize clamping device according to AASHTO M232

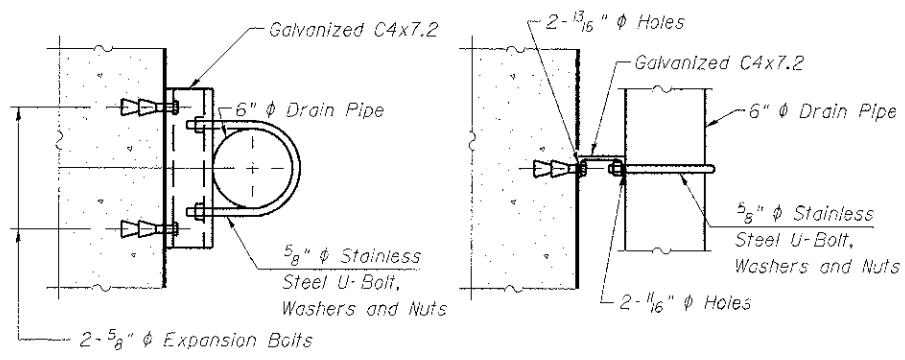


REDUCER DETAIL

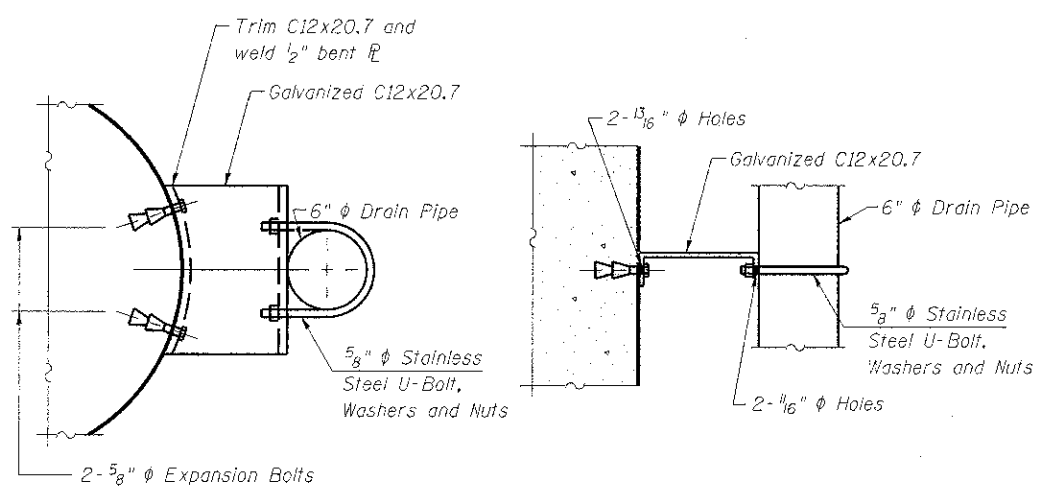
Notes:
 For details of Pipe Clamp connection to beam, see Sheet 10 of 29.
 The cost of splash block, drain pipes, pipe clamps, channels, expansion bolts, U-bolts, expansion collar and reducer shall be included in the cost of Drainage System.



**SECTION B-B
 DETAIL OF EXPANSION COLLAR**



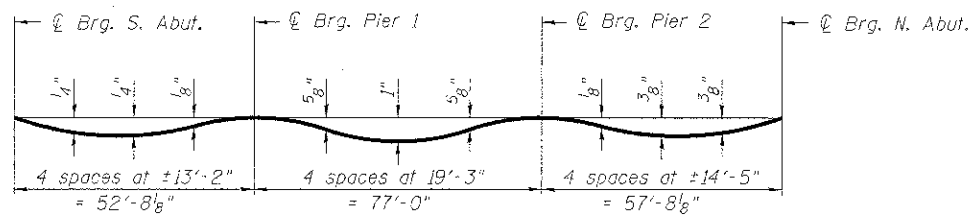
PIPE SUPPORT AT CRASHWALL DETAIL



PIPE SUPPORT AT COLUMNS DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage System	L. Sum	!

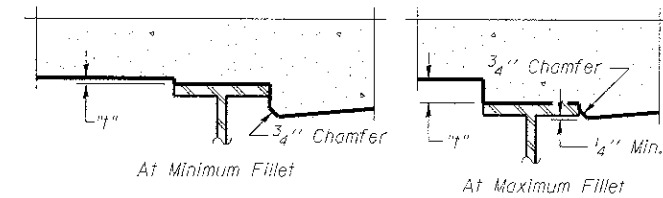


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

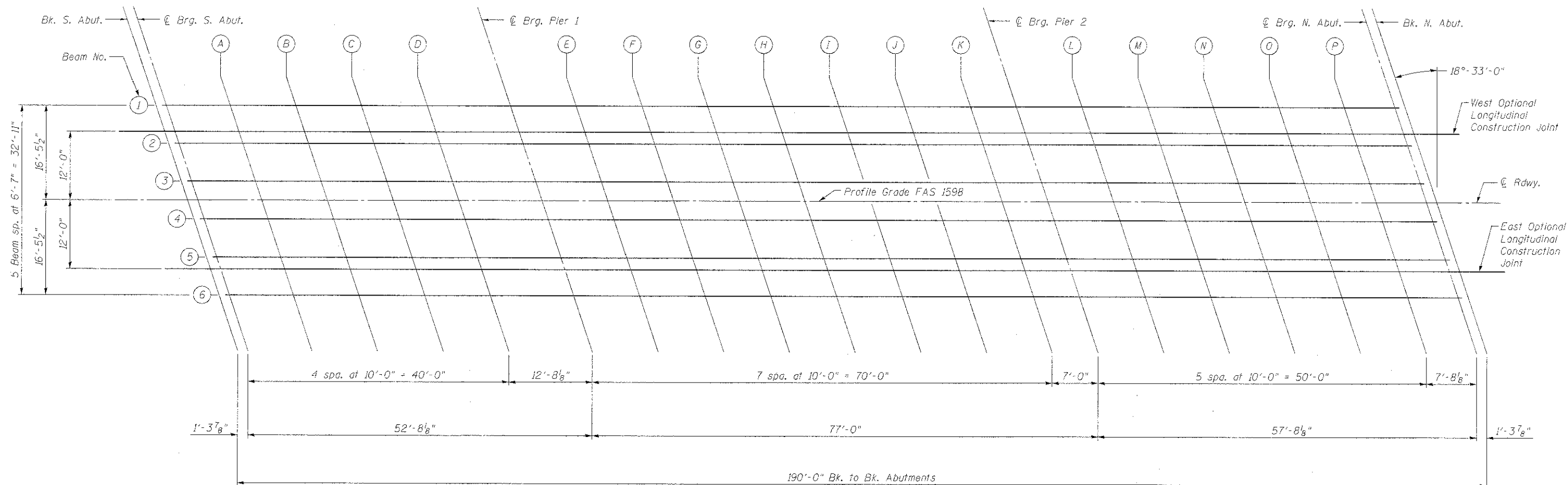
Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets 5 and 6 of 29.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 5 and 6 of 29, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

FILE NAME =	USER NAME = bjj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	TOP OF SLAB ELEVATIONS S.N. 001-3338		F.A.P. RTE. 1598	SECTION 11-00218-00-BR	COUNTY ADAMS	TOTAL SHEETS 53	SHEET NO. 20
G:\11\105\105 Plans\Bridge Plans Without Structural Steel\SLAB ELEVATIONS.dgn					CHECKED - RJP			CONTRACT NO. 99590			
PLOT SCALE = 84.0000 1" = 10'					DRAWN - RJP			ILLINOIS FED. AID PROJECT			
PLOT DATE = 11/5/2012					CHECKED - ADL			Klingner & Associates P.C.			

PROFILE GRADE FAS 1598

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+72.80	0.00	744.96	744.96
⊙ Brg. S. Abut.	102+74.12	0.00	744.98	744.98
A	102+84.12	0.00	745.11	745.12
B	102+94.12	0.00	745.22	745.24
C	103+04.12	0.00	745.33	745.34
D	103+14.12	0.00	745.42	745.42
⊙ Brg. Pier 1	103+26.80	0.00	745.52	745.52
E	103+36.80	0.00	745.59	745.61
F	103+46.80	0.00	745.64	745.69
G	103+56.80	0.00	745.68	745.76
H	103+66.80	0.00	745.71	745.80
I	103+76.80	0.00	745.73	745.80
J	103+86.80	0.00	745.74	745.79
K	103+96.80	0.00	745.74	745.75
⊙ Brg. Pier 2	104+03.80	0.00	745.73	745.73
L	104+13.80	0.00	745.71	745.72
M	104+23.80	0.00	745.68	745.70
N	104+33.80	0.00	745.63	745.67
O	104+43.80	0.00	745.57	745.61
P	104+53.80	0.00	745.51	745.53
⊙ Brg. N. Abut.	104+61.48	0.00	745.45	745.45
Bk. N. Abut.	104+62.80	0.00	745.44	745.44

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+67.28	-16.46	744.61	744.61
⊙ Brg. S. Abut.	102+68.60	-16.46	744.63	744.63
A	102+78.60	-16.46	744.75	744.77
B	102+88.60	-16.46	744.88	744.90
C	102+98.60	-16.46	744.99	745.01
D	103+08.60	-16.46	745.09	745.09
⊙ Brg. Pier 1	103+21.28	-16.46	745.20	745.20
E	103+31.28	-16.46	745.27	745.29
F	103+41.28	-16.46	745.33	745.38
G	103+51.28	-16.46	745.38	745.46
H	103+61.28	-16.46	745.42	745.50
I	103+71.28	-16.46	745.44	745.51
J	103+81.28	-16.46	745.46	745.50
K	103+91.28	-16.46	745.46	745.48
⊙ Brg. Pier 2	103+98.28	-16.46	745.46	745.46
L	104+08.28	-16.46	745.44	745.45
M	104+18.28	-16.46	745.42	745.44
N	104+28.28	-16.46	745.38	745.41
O	104+38.28	-16.46	745.33	745.36
P	104+48.28	-16.46	745.26	745.28
⊙ Brg. N. Abut.	104+55.96	-16.46	745.21	745.21
Bk. N. Abut.	104+57.28	-16.46	745.20	745.20

**WEST OPTIONAL
LONGITUDINAL CONSTRUCTION JOINT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+68.77	-12.00	744.72	744.72
⊙ Brg. S. Abut.	102+70.09	-12.00	744.74	744.74
A	102+80.09	-12.00	744.87	744.89
B	102+90.09	-12.00	744.99	745.01
C	103+00.09	-12.00	745.10	745.11
D	103+10.09	-12.00	745.20	745.20
⊙ Brg. Pier 1	103+22.77	-12.00	745.30	745.30
E	103+32.77	-12.00	745.37	745.40
F	103+42.77	-12.00	745.43	745.49
G	103+52.77	-12.00	745.48	745.56
H	103+62.77	-12.00	745.52	745.60
I	103+72.77	-12.00	745.54	745.61
J	103+82.77	-12.00	745.55	745.60
K	103+92.77	-12.00	745.56	745.57
⊙ Brg. Pier 2	103+99.77	-12.00	745.55	745.55
L	104+09.77	-12.00	745.53	745.54
M	104+19.77	-12.00	745.50	745.53
N	104+29.77	-12.00	745.46	745.50
O	104+39.77	-12.00	745.41	745.45
P	104+49.77	-12.00	745.35	745.37
⊙ Brg. N. Abut.	104+57.45	-12.00	745.29	745.29
Bk. N. Abut.	104+58.77	-12.00	745.28	745.28

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+69.49	-9.88	744.77	744.77
⊙ Brg. S. Abut.	102+70.81	-9.88	744.78	744.78
A	102+80.81	-9.88	744.91	744.93
B	102+90.81	-9.88	745.03	745.05
C	103+00.81	-9.88	745.14	745.15
D	103+10.81	-9.88	745.24	745.24
⊙ Brg. Pier 1	103+23.49	-9.88	745.34	745.34
E	103+33.49	-9.88	745.41	745.43
F	103+43.49	-9.88	745.47	745.52
G	103+53.49	-9.88	745.52	745.59
H	103+63.49	-9.88	745.56	745.64
I	103+73.49	-9.88	745.58	745.65
J	103+83.49	-9.88	745.59	745.63
K	103+93.49	-9.88	745.59	745.60
⊙ Brg. Pier 2	104+00.49	-9.88	745.58	745.58
L	104+10.49	-9.88	745.56	745.57
M	104+20.49	-9.88	745.53	745.56
N	104+30.49	-9.88	745.49	745.53
O	104+40.49	-9.88	745.44	745.48
P	104+50.49	-9.88	745.38	745.39
⊙ Brg. N. Abut.	104+58.17	-9.88	745.32	745.32
Bk. N. Abut.	104+59.49	-9.88	745.31	745.31

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+71.70	-3.29	744.90	744.90
⊙ Brg. S. Abut.	102+73.01	-3.29	744.92	744.92
A	102+83.01	-3.29	745.04	745.06
B	102+93.01	-3.29	745.16	745.18
C	103+03.01	-3.29	745.26	745.28
D	103+13.01	-3.29	745.36	745.36
⊙ Brg. Pier 1	103+25.70	-3.29	745.46	745.46
E	103+35.70	-3.29	745.53	745.55
F	103+45.70	-3.29	745.58	745.64
G	103+55.70	-3.29	745.63	745.71
H	103+65.70	-3.29	745.66	745.74
I	103+75.70	-3.29	745.68	745.75
J	103+85.70	-3.29	745.69	745.73
K	103+95.70	-3.29	745.69	745.70
⊙ Brg. Pier 2	104+02.70	-3.29	745.68	745.68
L	104+12.70	-3.29	745.66	745.67
M	104+22.70	-3.29	745.63	745.65
N	104+32.70	-3.29	745.59	745.62
O	104+42.70	-3.29	745.53	745.57
P	104+52.70	-3.29	745.46	745.48
⊙ Brg. N. Abut.	104+60.38	-3.29	745.40	745.40
Bk. N. Abut.	104+61.70	-3.29	745.39	745.39

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+73.91	3.29	744.93	744.93
⊙ Brg. S. Abut.	102+75.22	3.29	744.95	744.95
A	102+85.22	3.29	745.07	745.09
B	102+95.22	3.29	745.18	745.20
C	103+05.22	3.29	745.29	745.30
D	103+15.22	3.29	745.38	745.38
⊙ Brg. Pier 1	103+27.90	3.29	745.48	745.48
E	103+37.90	3.29	745.54	745.56
F	103+47.90	3.29	745.59	745.65
G	103+57.90	3.29	745.64	745.71
H	103+67.90	3.29	745.67	745.75
I	103+77.90	3.29	745.69	745.75
J	103+87.90	3.29	745.69	745.73
K	103+97.90	3.29	745.69	745.70
⊙ Brg. Pier 2	104+04.90	3.29	745.68	745.68
L	104+14.90	3.29	745.66	745.66
M	104+24.90	3.29	745.62	745.64
N	104+34.90	3.29	745.57	745.61
O	104+44.90	3.29	745.52	745.55
P	104+54.90	3.29	745.45	745.47
⊙ Brg. N. Abut.	104+62.59	3.29	745.39	745.39
Bk. N. Abut.	104+63.90	3.29	745.37	745.37

Note:
Offsets are measured from Profile Grade Line.

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+76.11	9.88	744.85	744.85
⊕ Brg. S. Abut.	102+77.43	9.88	744.87	744.87
A	102+87.43	9.88	744.99	745.01
B	102+97.43	9.88	745.10	745.13
C	103+07.43	9.88	745.20	745.22
D	103+17.43	9.88	745.29	745.30
⊕ Brg. Pier 1	103+30.11	9.88	745.39	745.39
E	103+40.11	9.88	745.45	745.47
F	103+50.11	9.88	745.50	745.56
G	103+60.11	9.88	745.54	745.62
H	103+70.11	9.88	745.57	745.65
I	103+80.11	9.88	745.58	745.65
J	103+90.11	9.88	745.59	745.63
K	104+00.11	9.88	745.58	745.60
⊕ Brg. Pier 2	104+07.11	9.88	745.57	745.57
L	104+17.11	9.88	745.55	745.55
M	104+27.11	9.88	745.51	745.53
N	104+37.11	9.88	745.46	745.49
O	104+47.11	9.88	745.40	745.43
P	104+57.11	9.88	745.33	745.35
⊕ Brg. N. Abut.	104+64.80	9.88	745.26	745.26
Bk. N. Abut.	104+66.11	9.88	745.25	745.25

**EAST OPTIONAL
LONGITUDINAL CONSTRUCTION JOINT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+76.83	12.00	744.83	744.83
⊕ Brg. S. Abut.	102+78.15	12.00	744.85	744.85
A	102+88.15	12.00	744.97	744.98
B	102+98.15	12.00	745.08	745.10
C	103+08.15	12.00	745.18	745.19
D	103+18.15	12.00	745.27	745.27
⊕ Brg. Pier 1	103+30.83	12.00	745.36	745.36
E	103+40.83	12.00	745.42	745.44
F	103+50.83	12.00	745.47	745.53
G	103+60.83	12.00	745.51	745.59
H	103+70.83	12.00	745.54	745.62
I	103+80.83	12.00	745.55	745.62
J	103+90.83	12.00	745.56	745.60
K	104+00.83	12.00	745.55	745.56
⊕ Brg. Pier 2	104+07.83	12.00	745.54	745.54
L	104+17.83	12.00	745.51	745.52
M	104+27.83	12.00	745.47	745.49
N	104+37.83	12.00	745.42	745.46
O	104+47.83	12.00	745.36	745.40
P	104+57.83	12.00	745.29	745.31
⊕ Brg. N. Abut.	104+65.51	12.00	745.22	745.22
Bk. N. Abut.	104+66.83	12.00	745.21	745.21

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	102+78.32	16.46	744.76	744.76
⊕ Brg. S. Abut.	102+79.46	16.46	744.77	744.77
A	102+89.64	16.46	744.89	744.91
B	102+99.64	16.46	745.00	745.02
C	103+09.64	16.46	745.10	745.11
D	103+19.64	16.46	745.18	745.19
⊕ Brg. Pier 1	103+32.32	16.46	745.28	745.28
E	103+42.32	16.46	745.34	745.36
F	103+52.32	16.46	745.38	745.44
G	103+62.32	16.46	745.42	745.50
H	103+72.32	16.46	745.45	745.53
I	103+82.32	16.46	745.46	745.53
J	103+92.32	16.46	745.46	745.50
K	104+02.32	16.46	745.45	745.47
⊕ Brg. Pier 2	104+09.32	16.46	745.44	745.44
L	104+19.32	16.46	745.41	745.42
M	104+29.32	16.46	745.37	745.39
N	104+39.32	16.46	745.32	745.36
O	104+49.32	16.46	745.26	745.29
P	104+59.32	16.46	745.18	745.20
⊕ Brg. N. Abut.	104+67.00	16.46	745.12	745.12
Bk. N. Abut.	104+68.32	16.46	745.11	745.11

Note:
Offsets are measured from Profile Grade Line.

FILE NAME =	USER NAME = bgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	TOP OF SLAB ELEVATIONS S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Or:\files\10015\05 Plans\Bridges\Plans Without Structural Steel\SLAB ELEVATIONS.dgn	CHECKED - RJP	REVISED -	1598			11-00218-00-BR	ADAMS	53	22	
PLOT SCALE = 80,000 1" = 100'	DRAWN - RJP	REVISED -	CONTRACT NO. 03590							
PLOT DATE = 11/5/2012	CHECKED - ADL	REVISED -	SHEET NO. 6 OF 29 SHEETS							

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	102+36.76	-18.00	744.10
A1	102+46.76	-18.00	744.26
A2	102+56.76	-18.00	744.42
N. End South Appr. Slab	102+66.76	-18.00	744.57

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	102+38.77	-12.00	744.26
A1	102+48.77	-12.00	744.42
A2	102+58.77	-12.00	744.58
N. End South Appr. Slab	102+68.77	-12.00	744.72

☉ ROADWAY & PROFILE GRADE

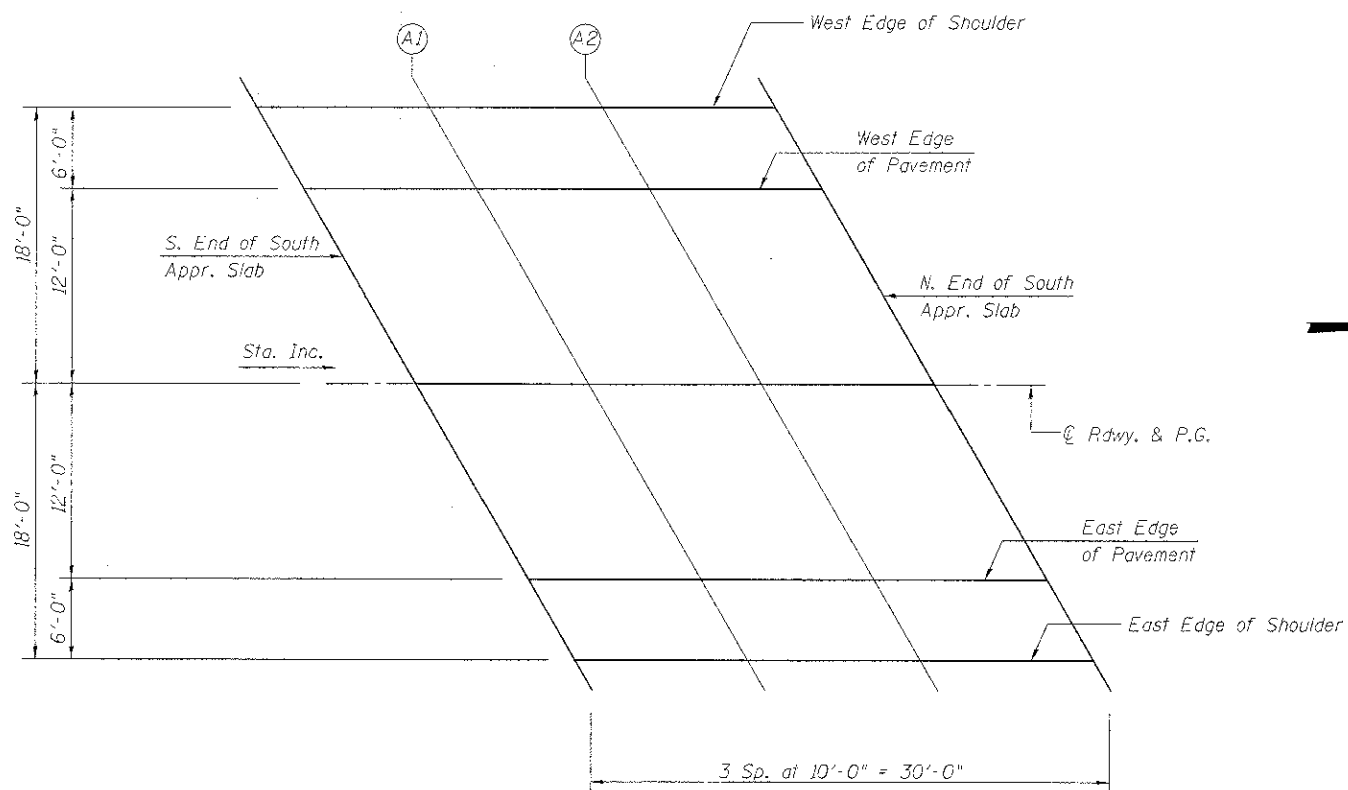
Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	102+42.80	0.00	744.51
A1	102+52.80	0.00	744.67
A2	102+62.80	0.00	744.83
N. End South Appr. Slab	102+72.80	0.00	744.96

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	102+46.83	12.00	744.39
A1	102+56.83	12.00	744.55
A2	102+66.83	12.00	744.70
N. End South Appr. Slab	102+76.83	12.00	744.83

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Slab	102+48.84	18.00	744.30
A1	102+58.84	18.00	744.45
A2	102+68.84	18.00	744.60
N. End South Appr. Slab	102+78.84	18.00	744.73



PLAN

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	104+56.76	-18.00	745.17
A3	104+66.76	-18.00	745.09
A4	104+76.76	-18.00	744.99
N. End North Appr. Slab	104+86.76	-18.00	744.89

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	104+58.77	-12.00	745.28
A3	104+68.77	-12.00	745.20
A4	104+78.77	-12.00	745.10
N. End North Appr. Slab	104+88.77	-12.00	744.99

☉ ROADWAY & PROFILE GRADE

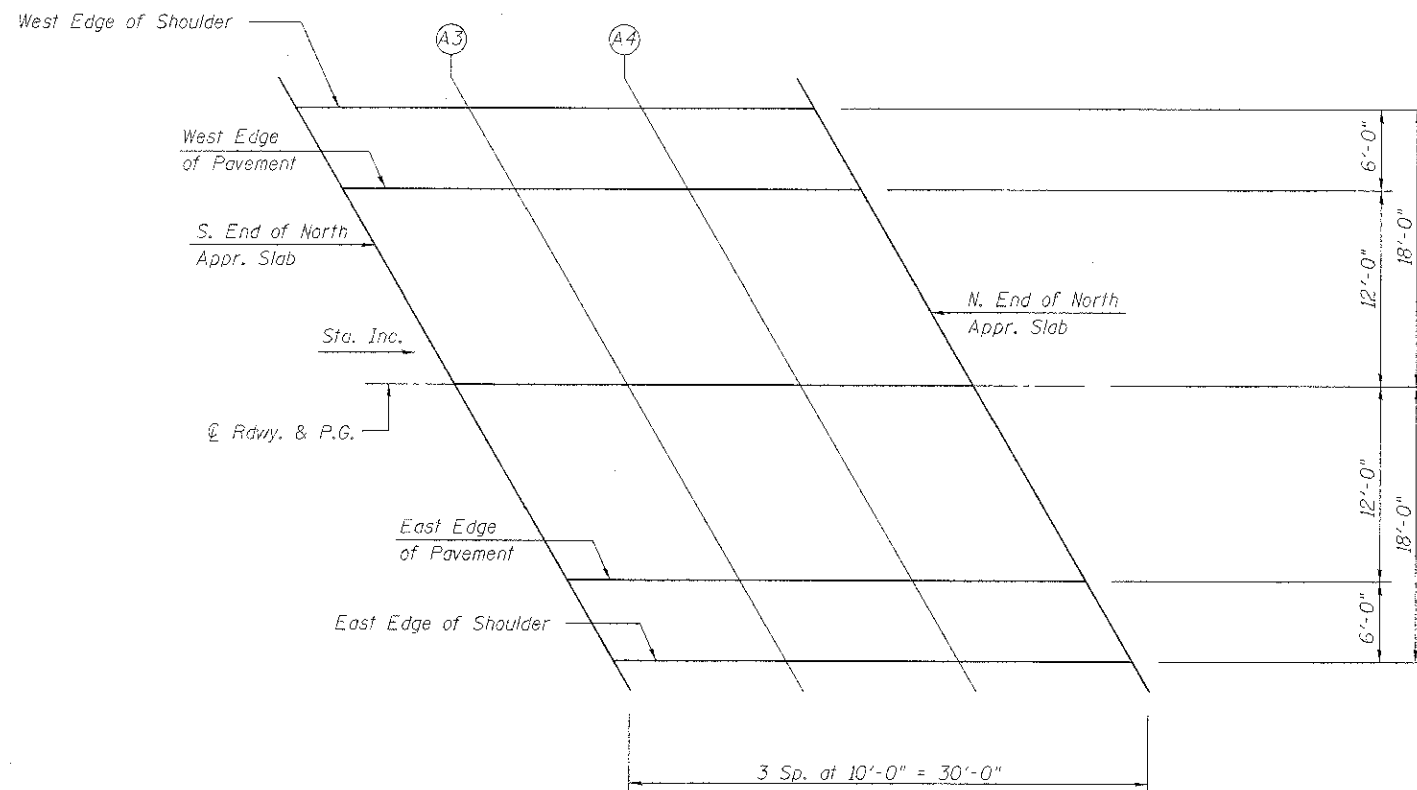
Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	104+62.80	0.00	745.44
A3	104+72.80	0.00	745.35
A4	104+82.80	0.00	745.24
N. End North Appr. Slab	104+92.80	0.00	745.14

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	104+66.83	12.00	745.21
A3	104+76.83	12.00	745.12
A4	104+86.83	12.00	745.01
N. End North Appr. Slab	104+96.83	12.00	744.91

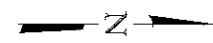
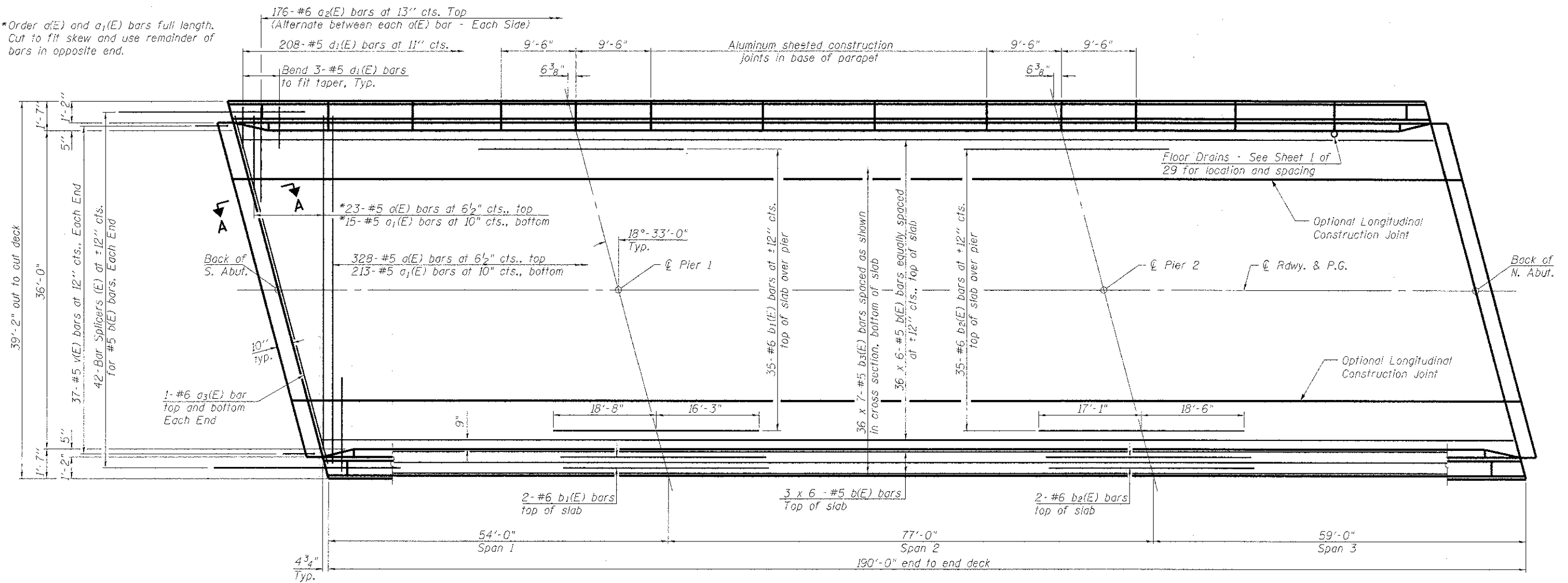
EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	104+68.84	18.00	745.07
A3	104+78.84	18.00	744.97
A4	104+88.84	18.00	744.87
N. End North Appr. Slab	104+98.84	18.00	744.77



PLAN

*Order a(E) and a₁(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

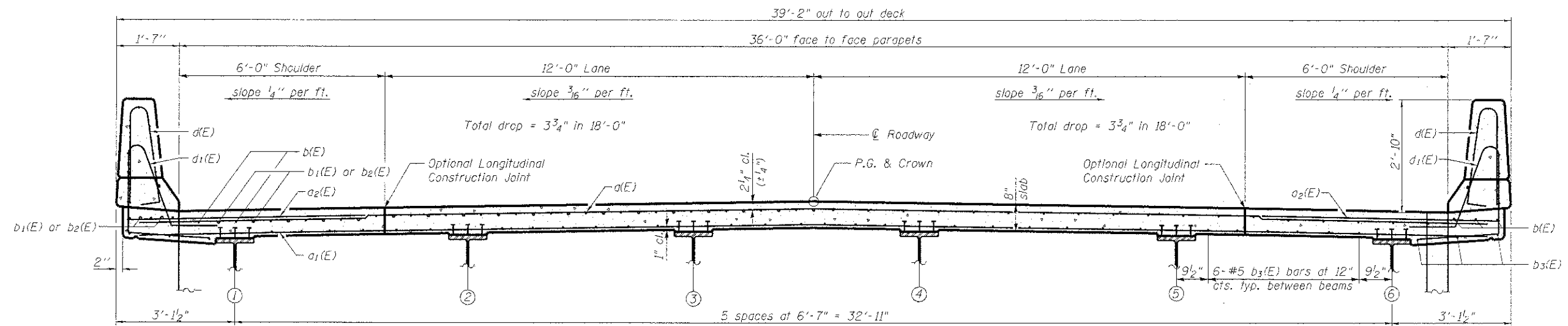


PLAN

Notes:
See Sheet 10 of 29 for superstructure details and Bill of Material.
Bars indicated thus 36 x 5-#5 etc. indicates 36 lines of bars with 5 lengths per line.
See Sheet 10 of 29 for parapet reinforcement.
See Sheet 11 of 29 for Section A-A.

MINIMUM BAR LAP

#5 bar = 2'-7"

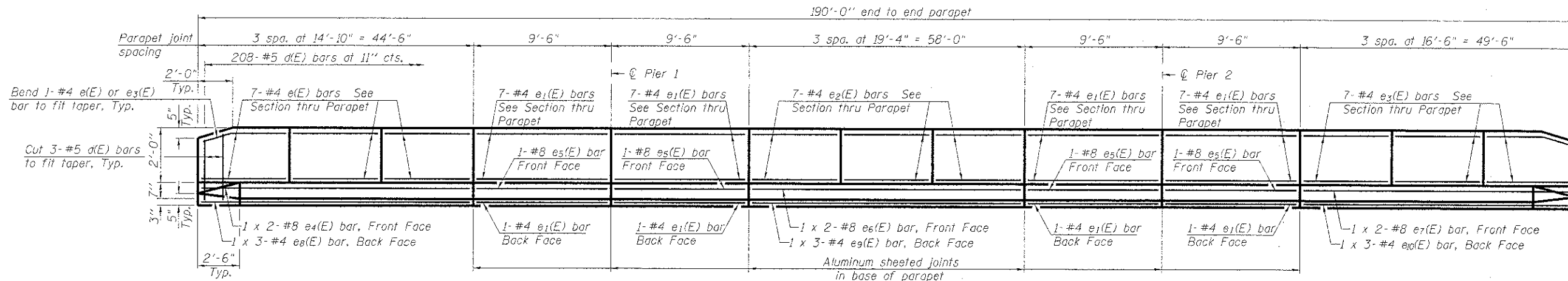


NEAR PIER

NEAR MIDSPAN

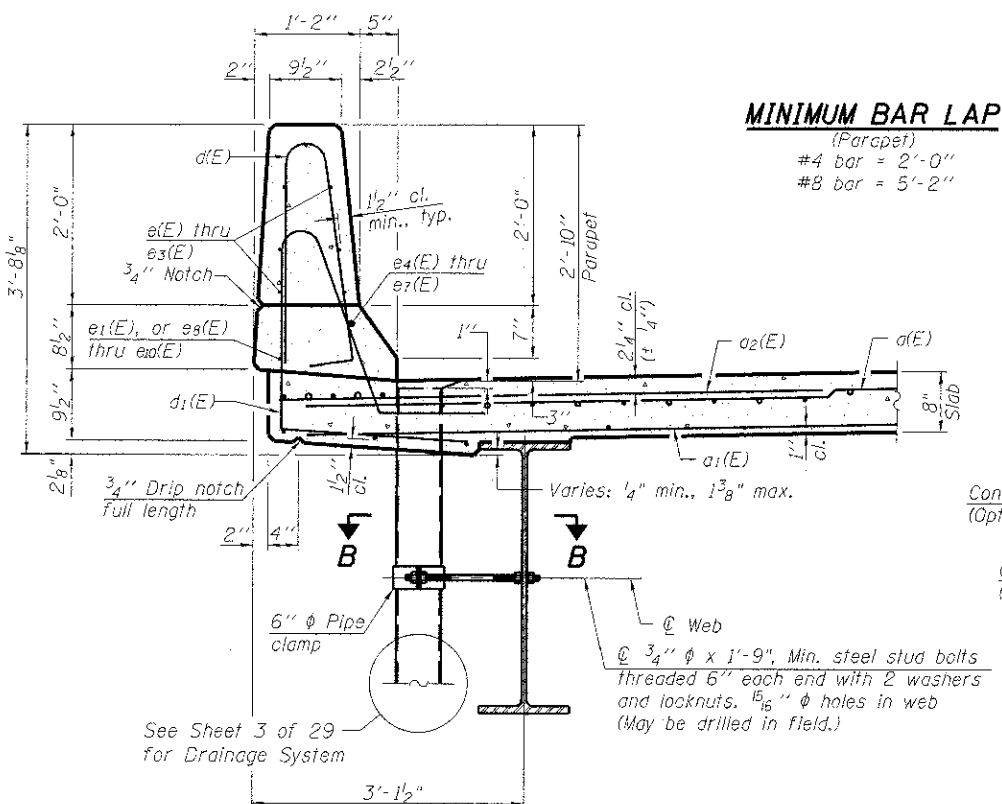
CROSS SECTION
(Looking North)

FILE NAME =	USER NAME = bgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Or:\11\10015\05 Plans\Bridg Plans\Superstructure.dgn		CHECKED - RJP	REVISED -			1598	11-00218-00-BR	ADAMS	53	25	
PLOT SCALE = 0.003293 1/4" IN.		DRAWN - RJP	REVISED -			CONTRACT NO. 9 3 5 9 0					
PLOT DATE = 11/5/2012		CHECKED - ADL	REVISED -			SHEET NO. 9 OF 29 SHEETS					



INSIDE ELEVATION OF PARAPET

(West Parapet shown - East Parapet opposite hand)



SECTION THRU PARAPET

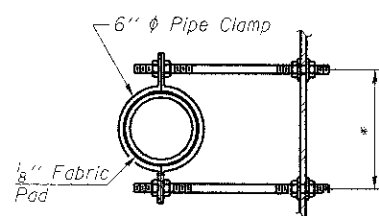
PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains need not be painted
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.
See fence rail anchorage note Sheet 13 of 29.

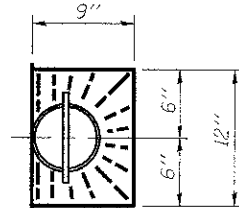
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	351	#5	38'-7"	—
d ₁ (E)	228	#5	38'-1"	—
a ₂ (E)	352	#6	6'-6"	—
a ₃ (E)	4	#6	40'-8"	—
b(E)	252	#5	33'-10"	—
b ₁ (E)	39	#6	34'-11"	—
b ₂ (E)	39	#6	35'-7"	—
b ₃ (E)	252	#5	29'-4"	—
d(E)	416	#5	5'-7"	┌
d ₁ (E)	416	#5	7'-11"	┌
e(E)	42	#4	14'-7"	—
e ₁ (E)	64	#4	9'-3"	—
e ₂ (E)	42	#4	19'-1"	—
e ₃ (E)	42	#4	16'-3"	—
e ₄ (E)	4	#8	24'-9"	—
e ₅ (E)	8	#8	9'-3"	—
e ₆ (E)	4	#8	31'-6"	—
e ₇ (E)	4	#8	27'-3"	—
e ₈ (E)	6	#4	16'-1"	—
e ₉ (E)	6	#4	20'-7"	—
e ₁₀ (E)	6	#4	17'-9"	—
m(E)	6	#6	41'-0"	—
m ₁ (E)	4	#6	38'-6"	—
m ₂ (E)	24	#6	9'-8"	—
m ₃ (E)	10	#6	6'-6"	—
m ₄ (E)	4	#6	3'-0"	—
s(E)	82	#5	6'-10"	┌
s ₁ (E)	72	#4	9'-3"	┌
v(E)	74	#5	3'-9"	┌
Reinforcement Bars, Epoxy Coated		Pound		58,940
Concrete Superstructure		Cu. Yds.		258.8
Floor Drains		Each		12
Bar Splicers		Each		84

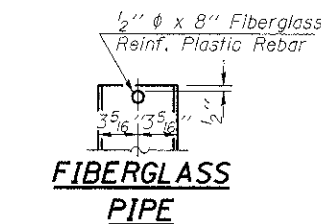
Bars indicated thus 1 x 2-#8 etc. Indicates 1 line of bars with 2 lengths per line.



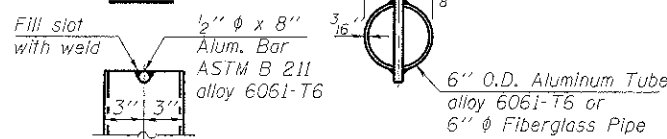
SECTION B-B
*Dimension as required by Pipe Clamp



TOP PLAN

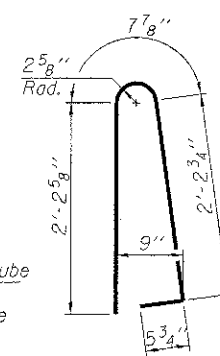


FIBERGLASS PIPE

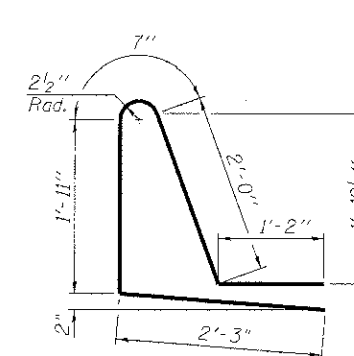


ALUMINUM TUBE

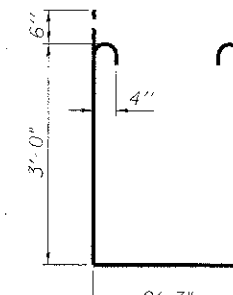
TOP PLAN (Showing Aluminum Tube)



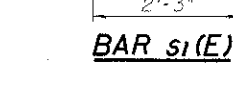
BAR d(E)



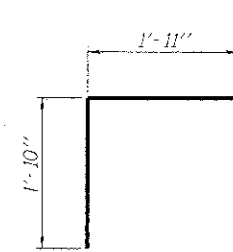
BAR d₁(E)



BAR s(E)



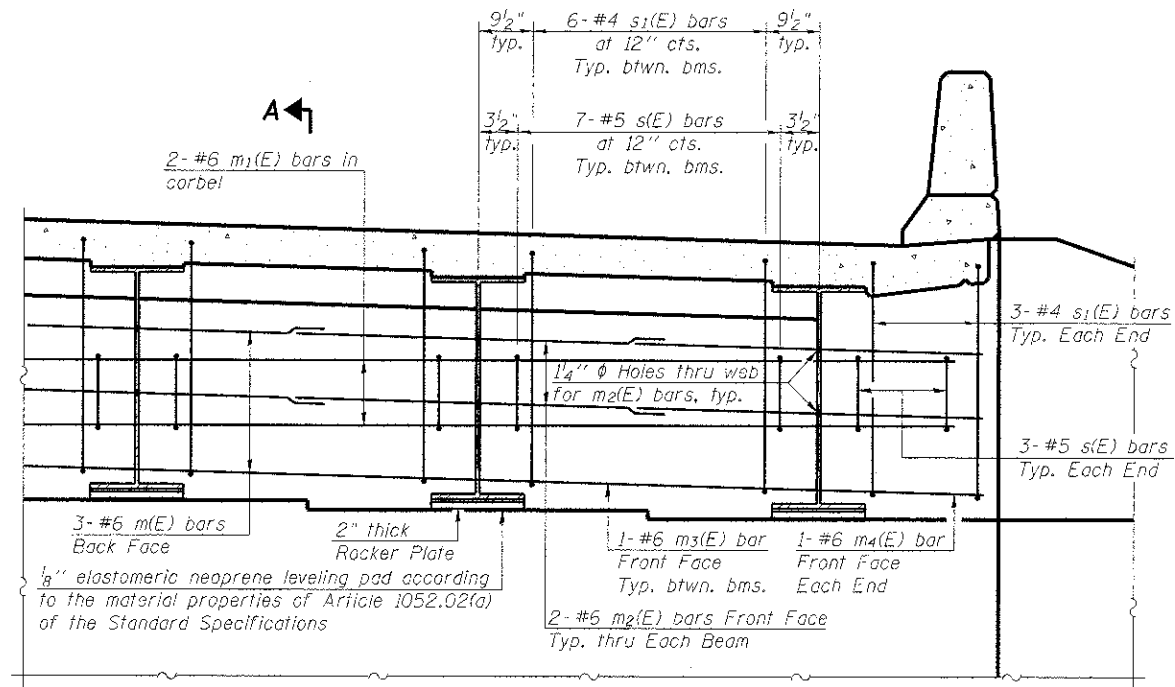
BAR s₁(E)



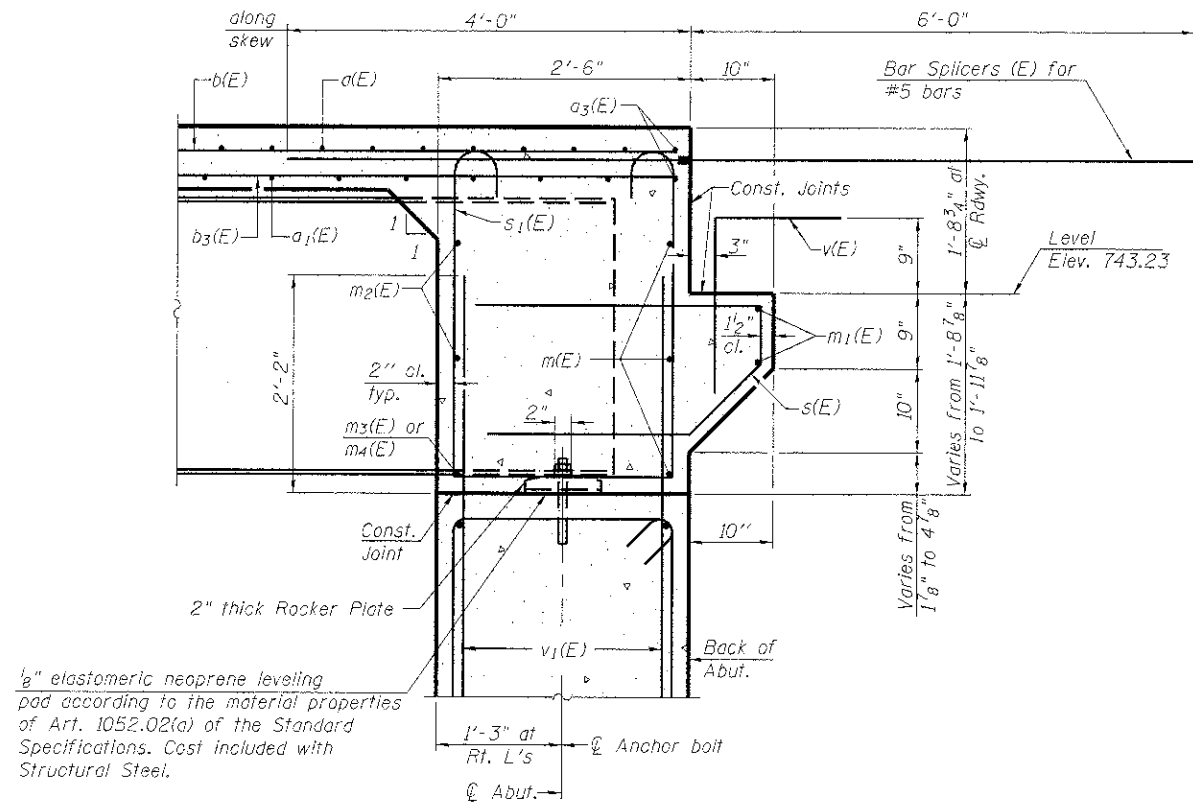
BAR v(E)

Notes:
 Reinforcement bars in diaphragm are billed with superstructure on Sheet 10 of 29.
 Concrete in diaphragm is included with Concrete Superstructure on Sheet 10 of 29.
 For details of bars s(E) & s₁(E) see Sheet 10 of 29.
 The s(E) and s₁(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
 For location of holes thru web, see Sheet 15 of 29.

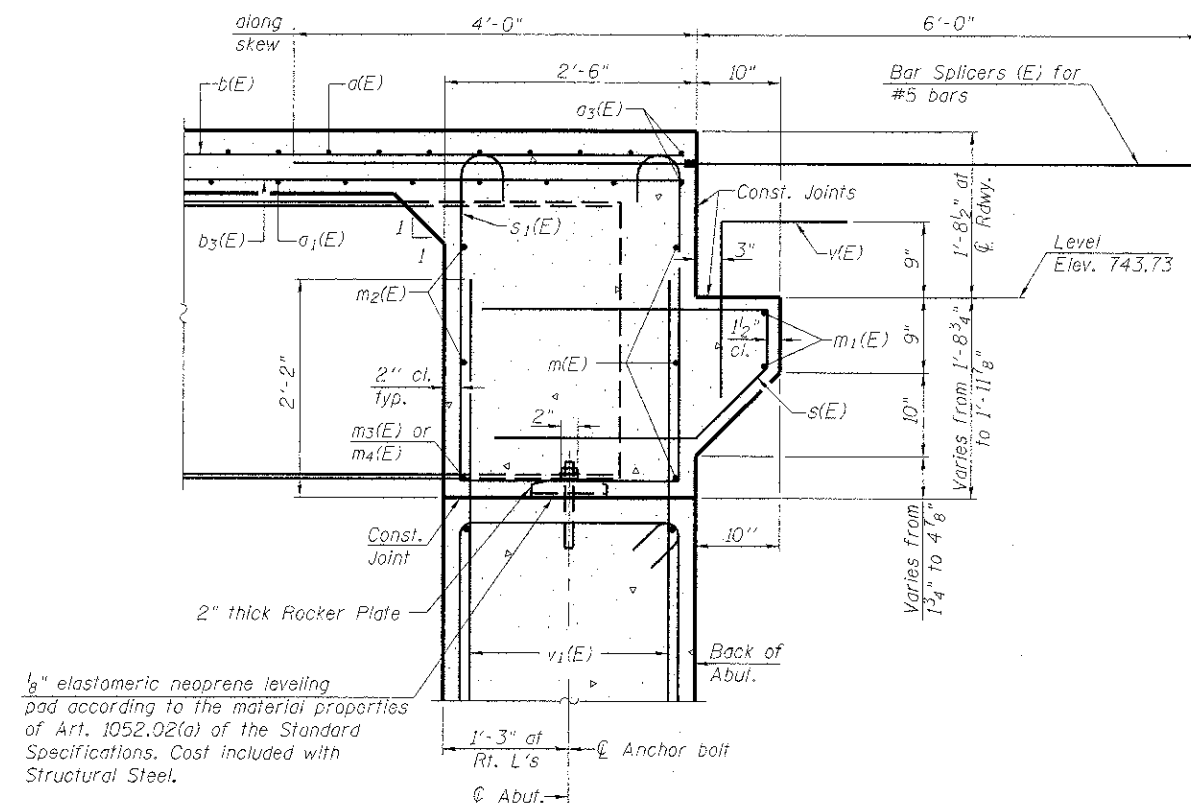
MIN. BAR LAP
 #6 bar = 3'-4"



DIAPHRAGM ELEVATION AT ABUTMENT
 (Dimensions at Rt. L's to Beams)

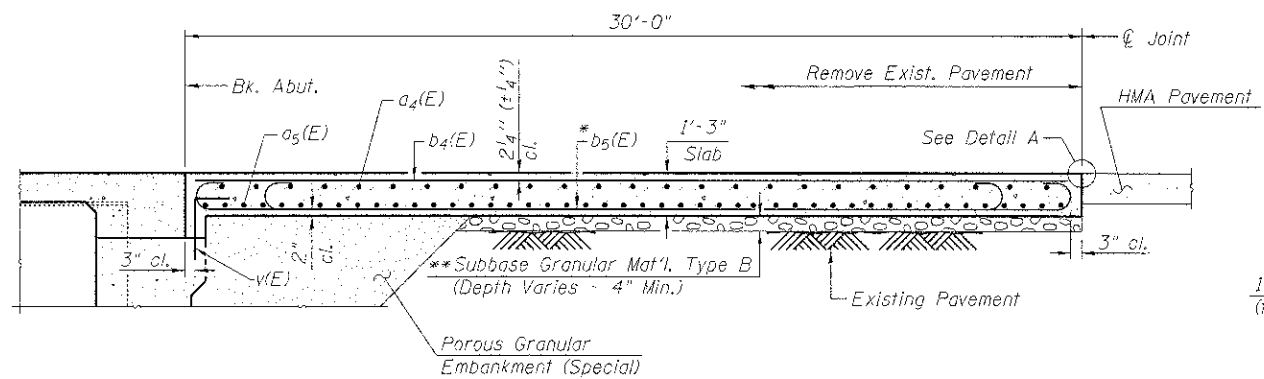


SECTION A-A @ SOUTH ABUT.
 Dimensions at right angles to abutment, except as shown.

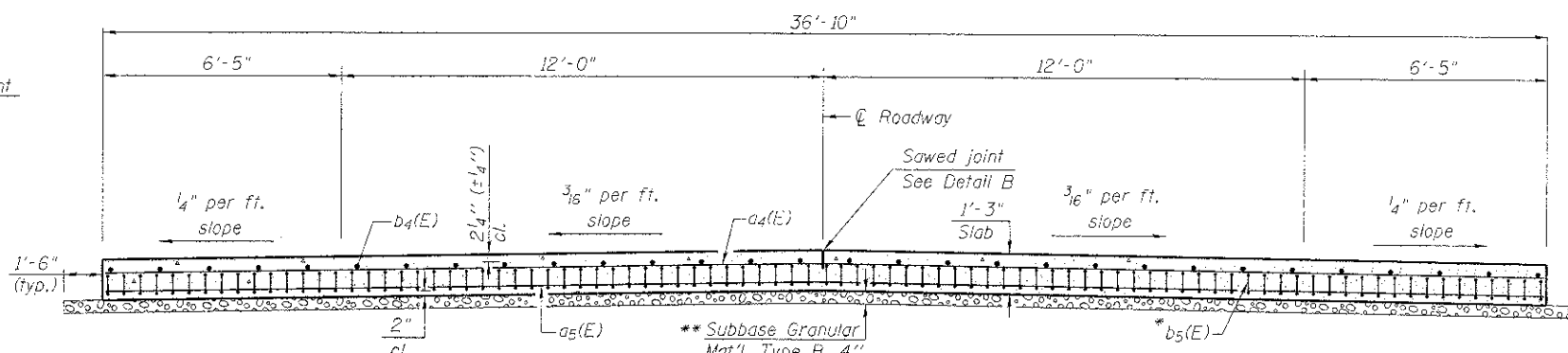


SECTION A-A @ NORTH ABUT.
 Dimensions at right angles to abutment, except as shown.

FILE NAME =	USER NAME = bgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	INTEGRAL ABUTMENT DIAPHRAGM DETAILS S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\1\Files\110015\05 Plans\B-ridge Plans\Superstructure.dgn		CHECKED - RJP	REVISED -			1598	11-00218-00-BR	ADAMS	53	27
PLOT SCALE = 0.003293 1/2 IN.		DRAWN - RJP	REVISED -			CONTRACT NO. 93590				
PLOT DATE = 11/5/2012		CHECKED - ADL	REVISED -			SHEET NO. 11 OF 29 SHEETS				

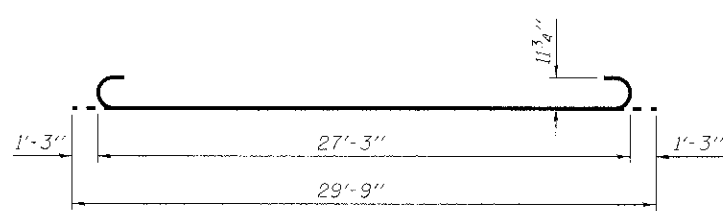


SECTION C-C

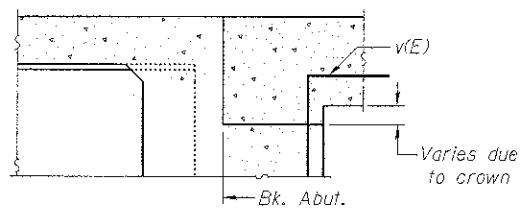


SECTION D-D

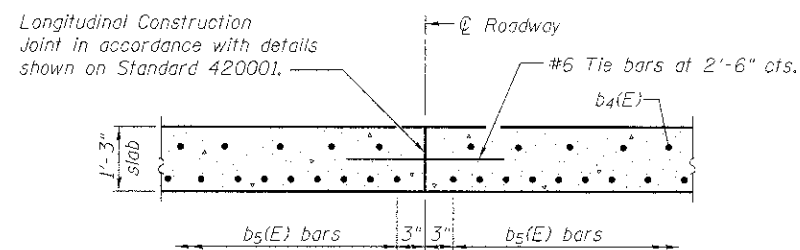
(See Plan for dimensions not shown)



BAR b5(E)



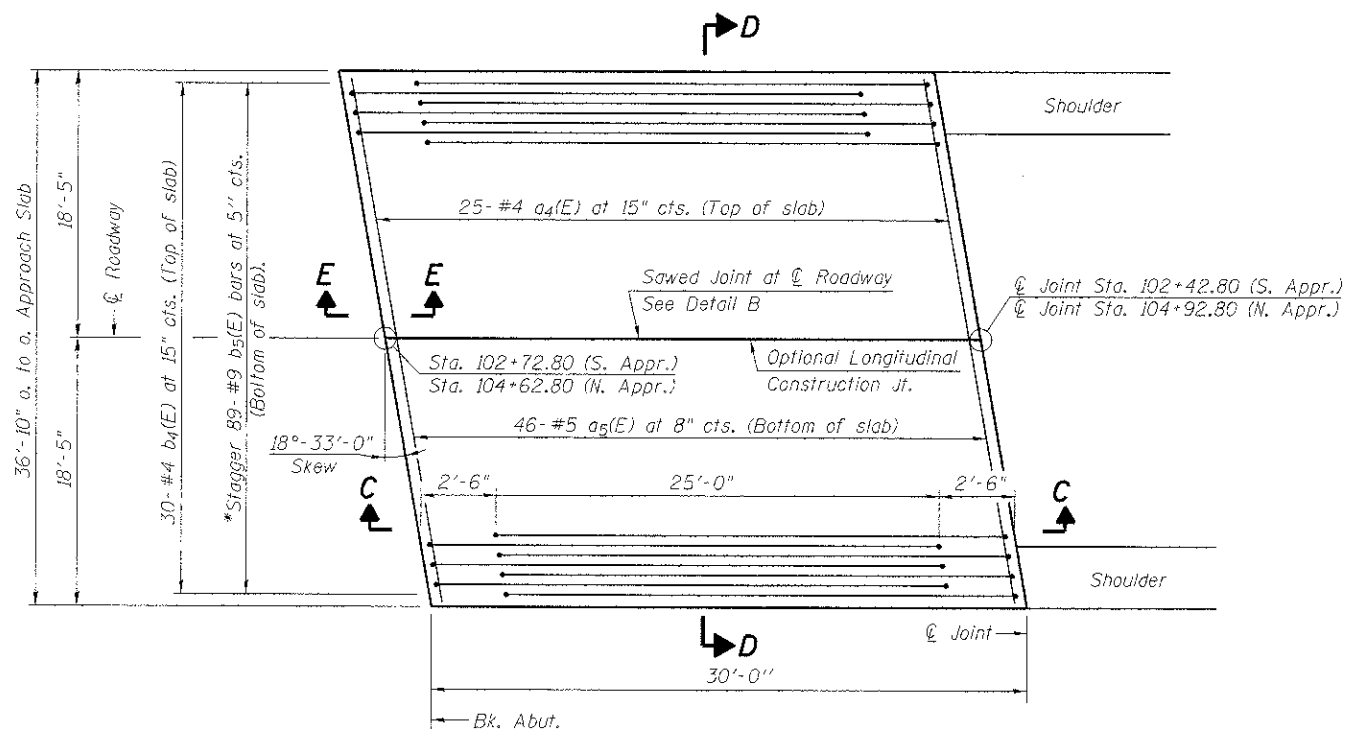
SECTION E-E



OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

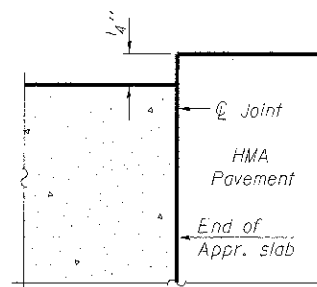
As approved by the Engineer, the Contractor may elect to reduce the width of pour by use of the Optional Longitudinal Construction Joint shown. Joint shall be located at CL roadway.

- Notes:
- Approach slab concrete shall be paid for as Concrete Superstructure. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated. $a_4(E)$ and $a_5(E)$ bar spacings measured along CL Rdwy.
 - For $v(E)$ bar details, see sheet 10 of 29.
 - For bar splicer details, see sheet 26 of 29.
 - For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 29.
 - * Tilt #9 $b_5(E)$ bars as required to maintain clearance.
 - ** Cost included with Concrete Superstructure.

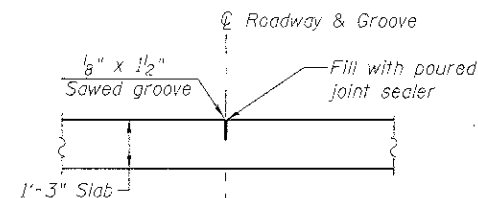


PLAN

Note:
North Bridge Approach Pavement shown, South Bridge Approach Pavement the same, except opposite hand.



**FLEXIBLE PAVEMENT
DETAIL A**

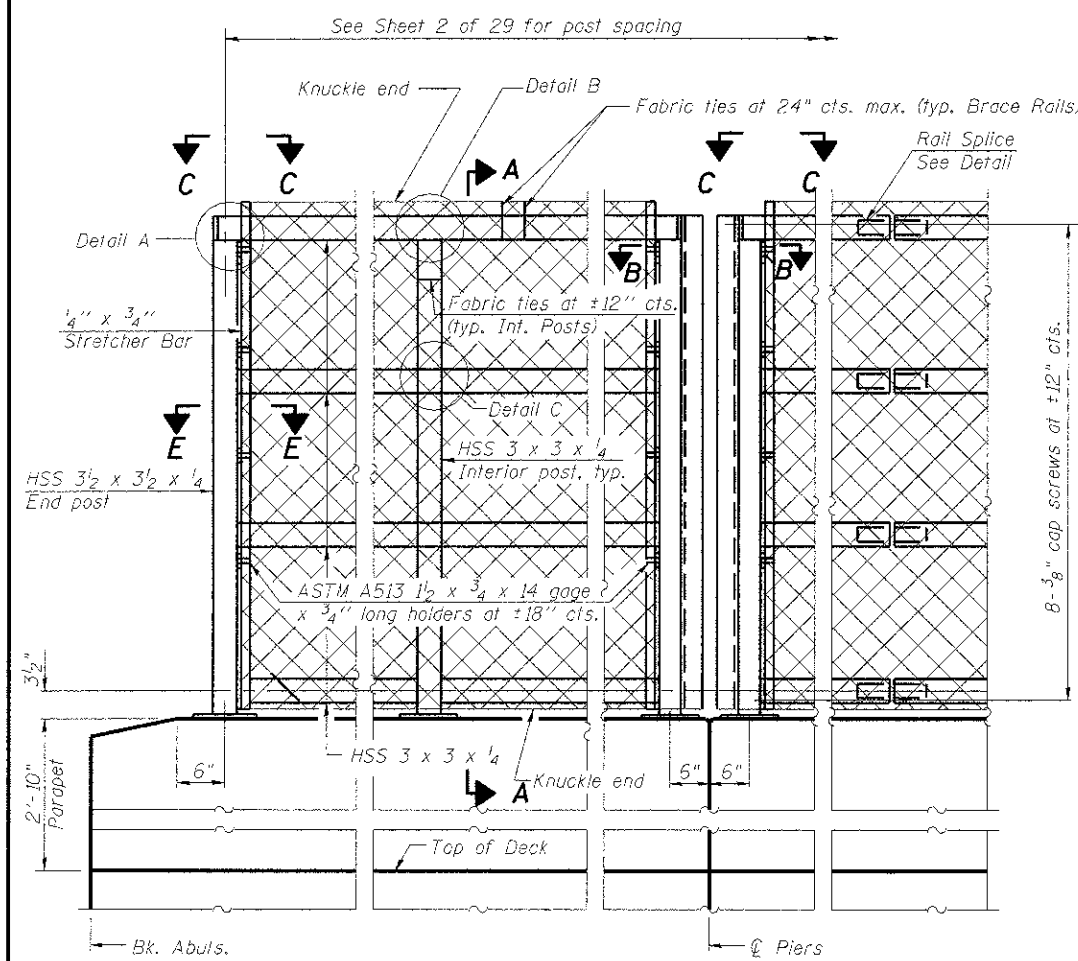


**DETAIL B
(Reinforcement Not Shown)**

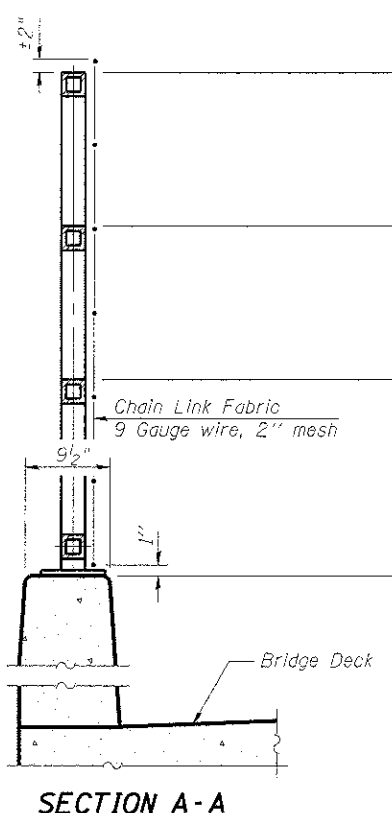
**TWO APPROACHES
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$a_4(E)$	50	#4	38'-6"	—
$a_5(E)$	92	#5	38'-6"	—
$b_4(E)$	60	#4	29'-8"	—
$b_5(E)$	178	#9	29'-9"	⌋
Concrete Superstructure		Cu. Yd.	103.0	
Reinforcement Bars, Epoxy Coated		Pound	24,170	

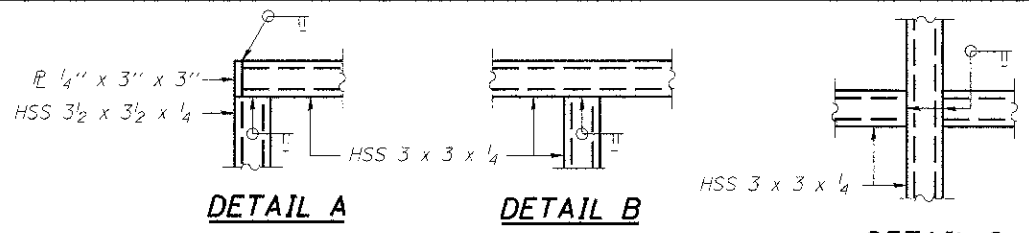
Note:
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



ELEVATION
(Inside Face)



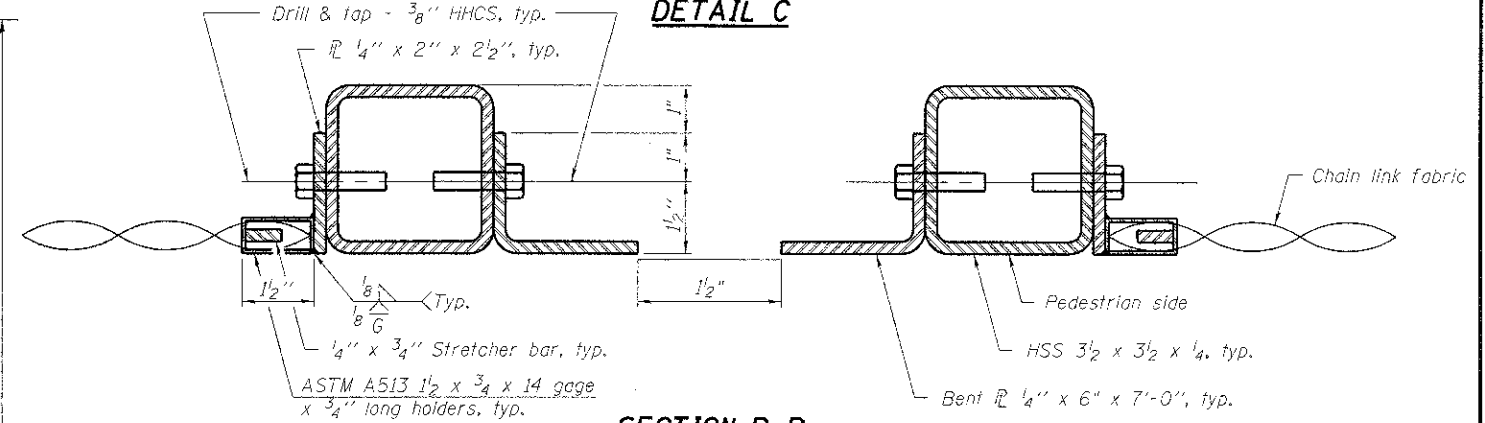
SECTION A-A



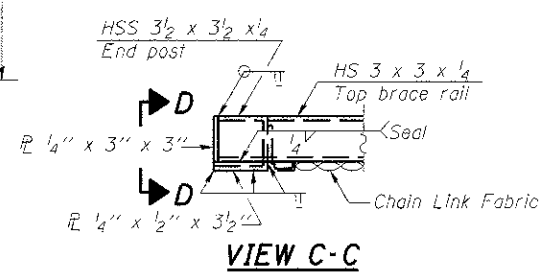
DETAIL A

DETAIL B

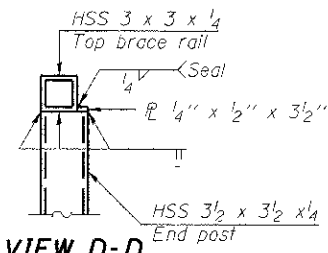
DETAIL C



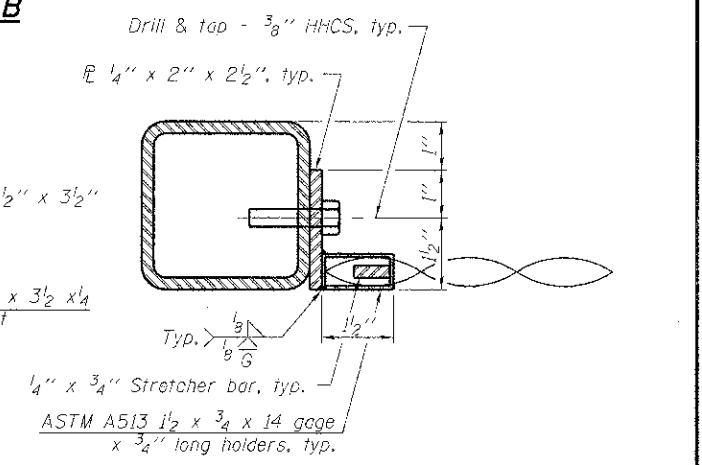
SECTION B-B
(Over Piers)



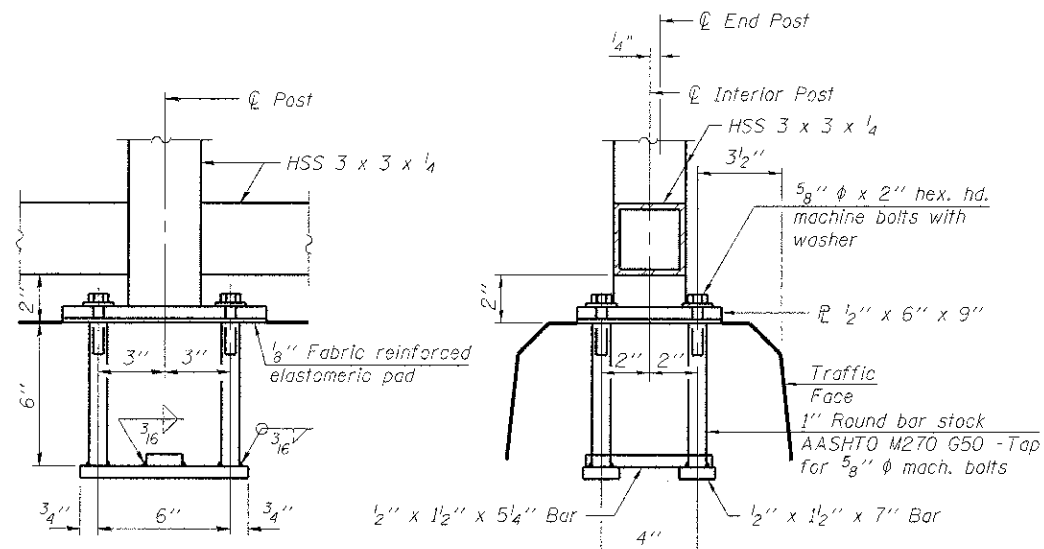
VIEW C-C



VIEW D-D



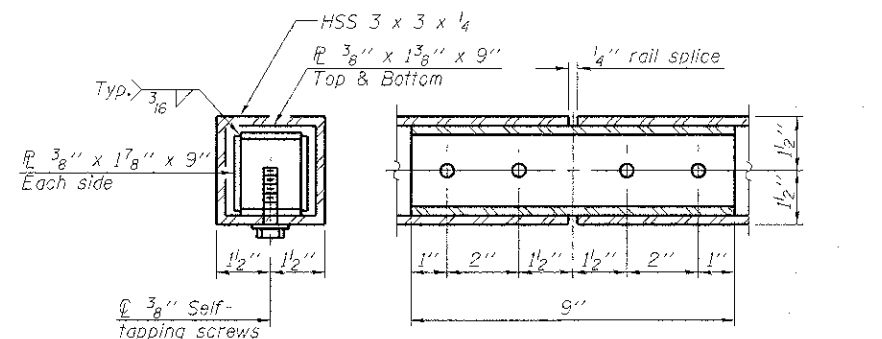
SECTION E-E



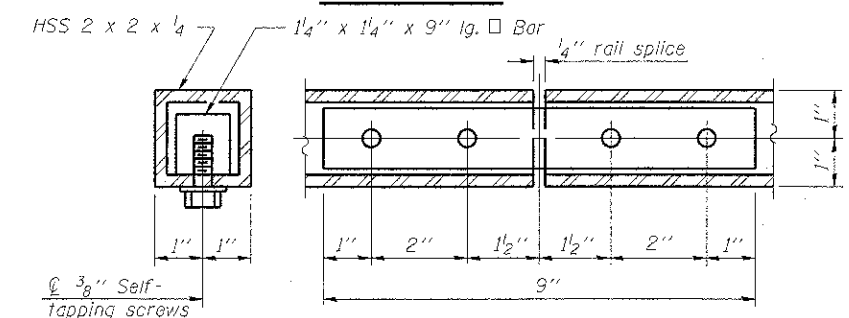
ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

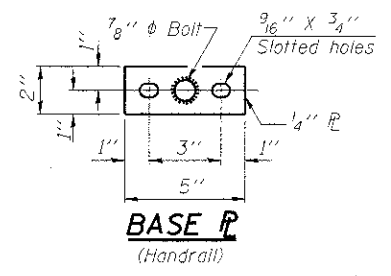
*Variable - See Plans
(10'-0" Maximum Post Spacing)



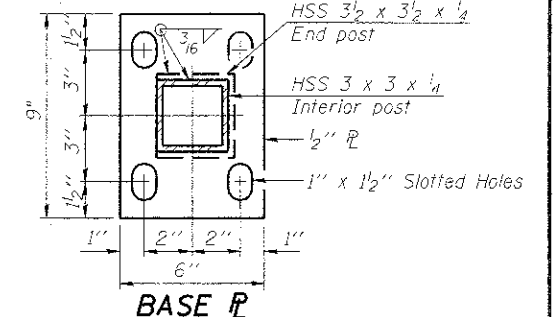
RAIL SPLICE



HANDRAIL SPLICE



BASE P
(Handrail)

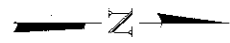
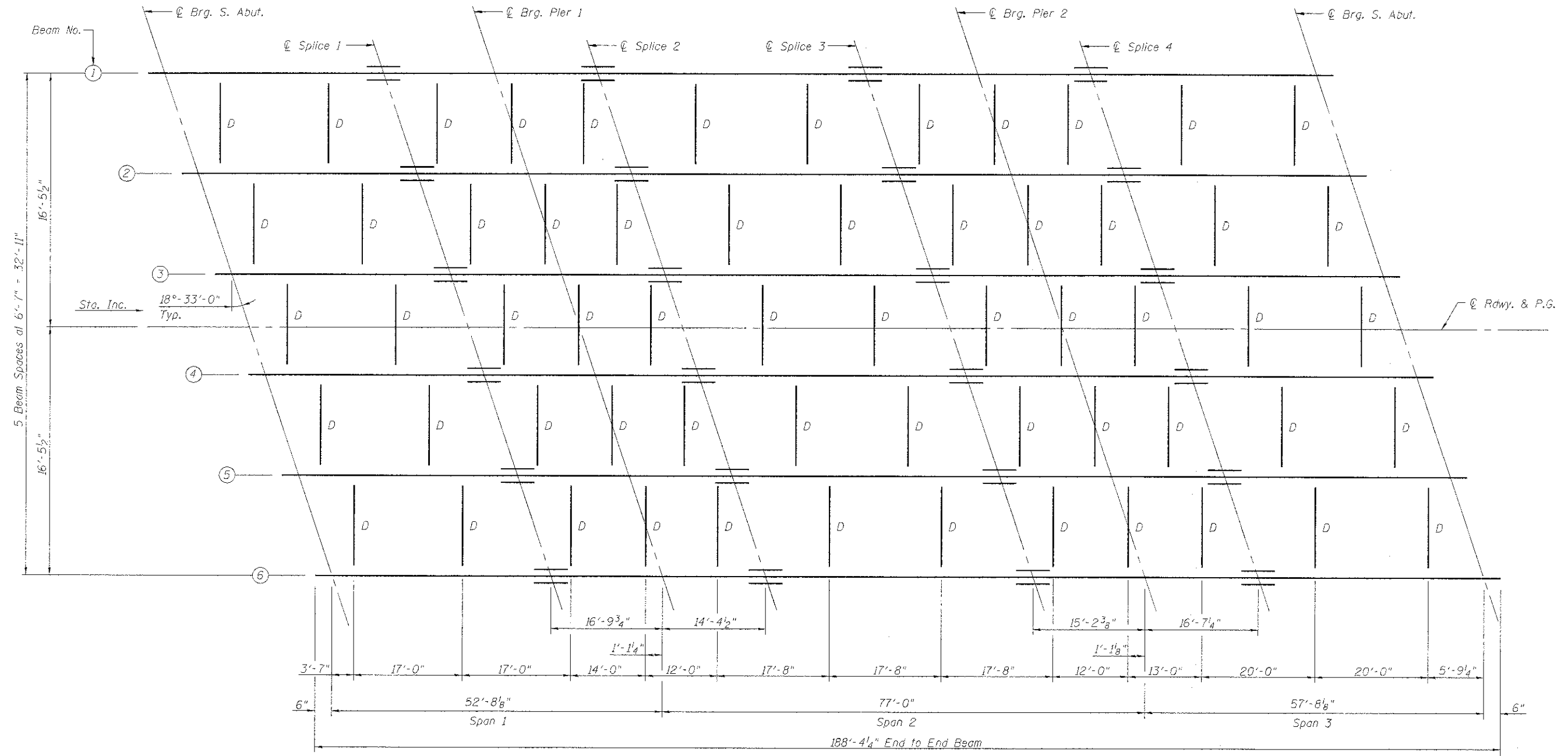


BASE R

BILL OF MATERIAL

Item	Unit	Quantity
Bridge Fence Railing	Foot	370

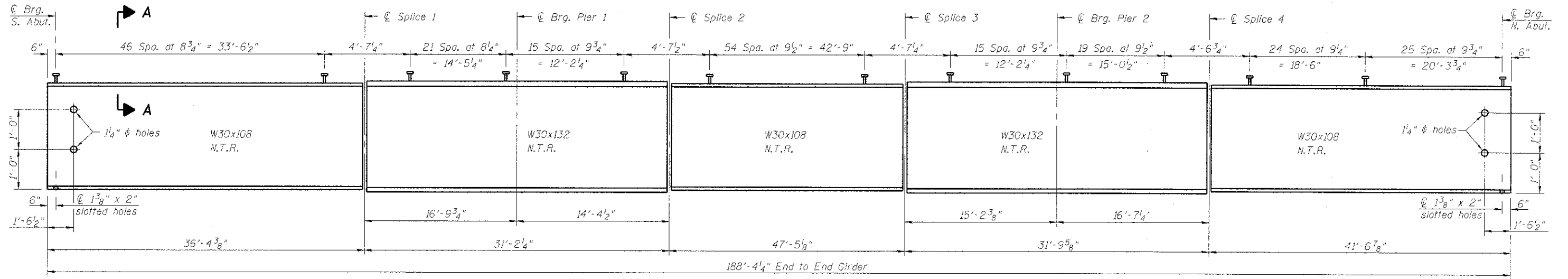
FILE NAME =	USER NAME = bgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	BRIDGE FENCE RAILING S.N. 001-3338	F.A.P. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Or:\files\12019\95 Plans\Bridge Plans\Without Structural Steel\Bridge Fence Railing	CHECKED - RJP	REVISOR - RJP	REVISOR -			1598	11-00218-00-BR	ADAMS	53	29
PLOT SCALE = 0.003304' / 1"	DRAWN - RJP	REVISOR -	REVISOR -			CONTRACT NO. 93590				
PLOT DATE = 11/05/2012	CHECKED - ADL	REVISOR -	REVISOR -			SHEET NO. 13 OF 29 SHEETS				



FRAMING PLAN

Note:
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

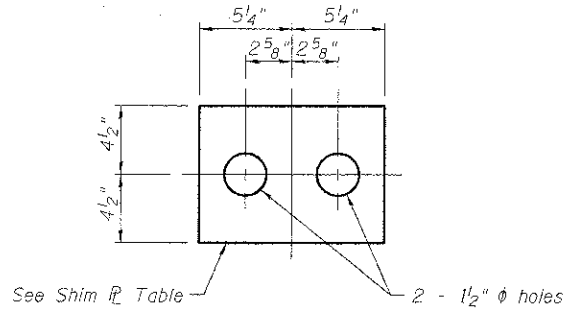
FILE NAME =	USER NAME = bgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	FRAMING PLAN S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Q:\11\files\110015\W5 Plans\Bridg Bridge Plans Without Structural Steel\Framing Plan.dgn		CHECKED - RJP	REVISED -			1598	11-00218-00-BR	ADAMS	53	30
PLOT SCALE = 0.003276 1/ IN.		DRAWN - RJP	REVISED -			CONTRACT NO. 93590				
PLOT DATE = 11/5/2012		CHECKED - ADL	REVISED -			ILLINOIS FED. AID PROJECT Klingner & Associates P.C.				



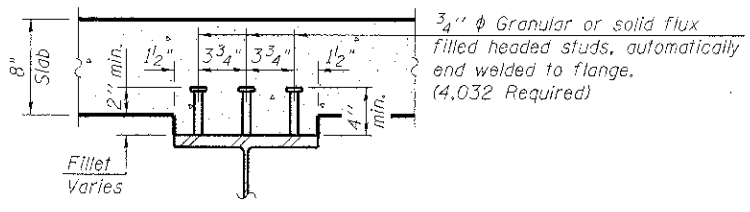
BEAM ELEVATION

"N.T.R." denotes components to which notch toughness requirements are applicable.

Shim Pl. Table	
Size	Location
9" x 10 1/2" x 1/2"	Beam 3 - S. Abut.
9" x 10 1/2" x 7/8"	Beam 4 - S. Abut.
9" x 10 1/2" x 1/4"	Beam 3 - N. Abut.

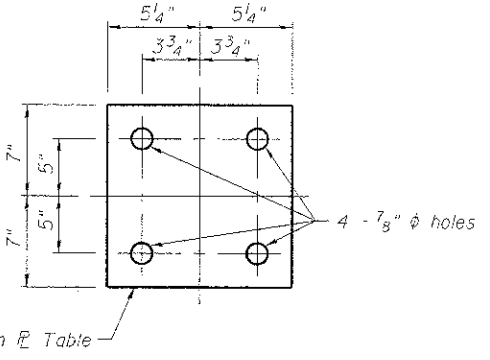


SHIM PLATE - ABUTMENTS



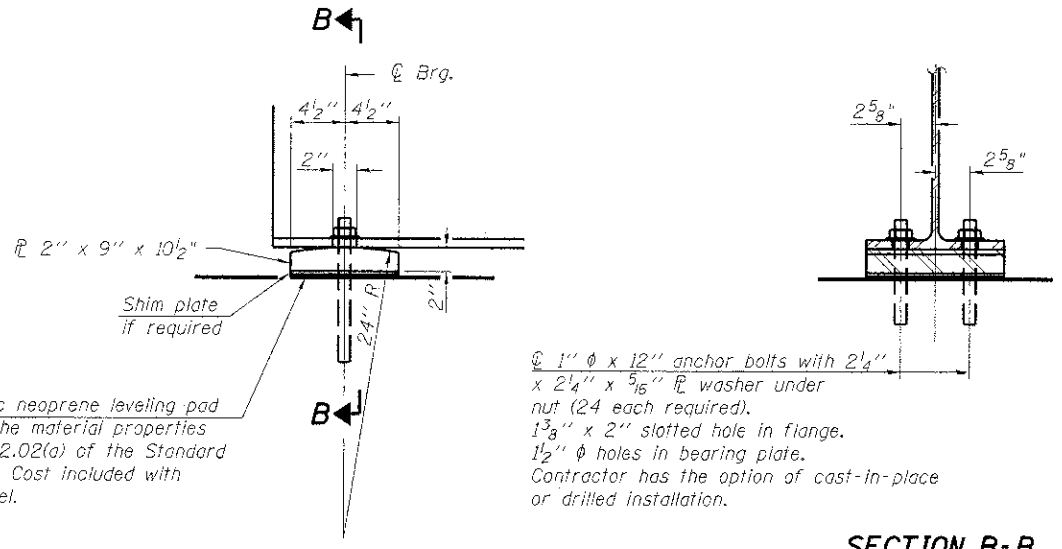
SECTION A-A

Shim Pl. Table	
Size	Location
1'-2" x 10 1/2" x 1/4"	Beam 4 - Pier 1



SHIM PLATE - PIERS

Notes:
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 All beams, shim plates, bearing plates, anchor bolts, nuts and washers shall be galvanized in the shop according to AASHTO M111 or F239 as applicable.
 The top of the beams shall be masked to prevent galvanizing at the stud shear connectors according to the Special Provision for Hot Dip Galvanizing for Structural Steel.



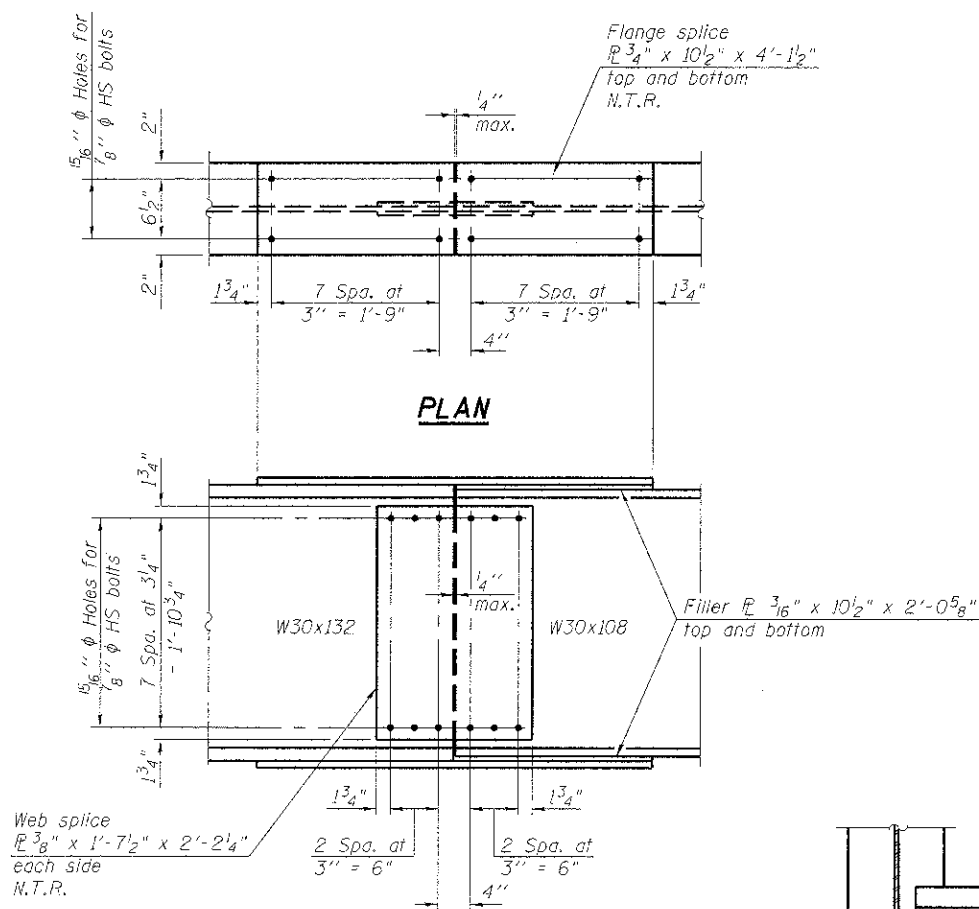
ELEVATION AT ABUTMENT

SECTION B-B

FIXED BEARING

©TOP OF BEAM ELEVATIONS								
Beam No.	© Brg. S. Abut.	© Splice 1	© Brg. Pier 1	© Splice 2	© Splice 3	© Brg. Pier 2	© Splice 4	© Brg. N. Abut.
1	743.908	744.278	744.430	744.559	744.722	744.695	744.664	744.491
2	744.064	744.426	744.573	744.699	744.850	744.818	744.784	744.600
3	744.197	744.549	744.692	744.814	744.953	744.918	744.879	744.585
4	744.226	744.569	744.708	744.827	744.954	744.914	744.871	744.567
5	744.152	744.486	744.620	744.735	744.850	744.807	744.760	744.545
6	744.054	744.379	744.509	744.620	744.723	744.676	744.625	744.400

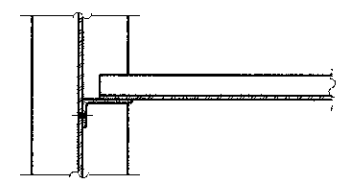
① For fabrication only - theoretical elevation before dead load deflection



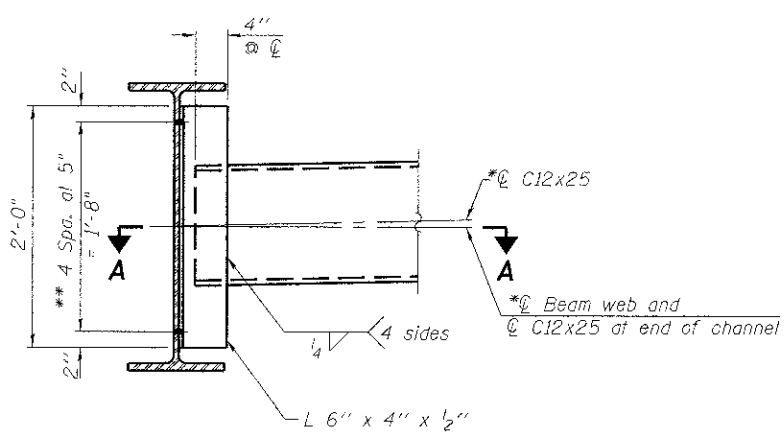
PLAN

ELEVATION

SPLICE DETAIL
(24 Required)



SECTION A-A



INTERIOR DIAPHRAGM, D
(60 Required)

Notes:
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 All splice plates, fillet plates, bolts, washers, diaphragms and connection plates shall be galvanized according to AASHTO M111 or F239 as applicable.
 Galvanized surfaces on beam and plate in contact with each other shall be roughened by hand-wire brushing after galvanizing. Power-wire brushing shall not be permitted. See Special Provisions.

Note:
 Two hardened washers required for each set of oversized holes.
 *Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
 **3/4" φ HS bolts, 15/16" φ holes

INTERIOR BEAM MOMENT TABLE						
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3	
I_s	(in ⁴)	4,470	5,770	4,470	5,770	4,470
$I_c(n)$	(in ⁴)	13,269		13,269		13,269
$I_c(3n)$	(in ⁴)	9,789		9,789		9,789
$I_c(cr)$	(in ⁴)		7,977		7,977	
S_s	(in ³)	300	380	300	380	300
$S_c(n)$	(in ³)	467		467		467
$S_c(3n)$	(in ³)	421		421		421
$S_c(cr)$	(in ³)		647		647	
DC1	(k/ft)	0.815	0.837	0.815	0.837	0.815
M _{DC1}	(k)	122	377	213	409	163
DC2	(k/ft)	0.150	0.150	0.150	0.150	0.150
M _{DC2}	(k)	23	68	40	74	30
DW	(k/ft)	0.329	0.329	0.329	0.329	0.329
M _{DW}	(k)	50	150	87	163	66
M _{L + IM}	(k)	565	661	643	692	625
M _u (Strength I)	(k)	1,245	1,938	1,572	2,059	1,434
φ _r M _n	(k)	2,402	2,313	2,309	2,310	2,360
f _s DC1	(ksi)	4.9	11.9	8.5	12.9	6.5
f _s DC2	(ksi)	0.7	1.3	1.1	1.4	0.9
f _s DW	(ksi)	1.4	2.8	2.5	3.0	1.9
f _s (L+IM)	(ksi)	16.1	12.3	18.3	12.8	17.8
f _s (Service II)	(ksi)	27.9	31.9	36.0	34.0	32.4
0.95R _n F _{yf}	(ksi)	47.5	47.5	47.5	47.5	47.5
V _r	(k)	29.6	56.7	32.0	55.4	30.1

INTERIOR BEAM REACTION TABLE					
	S. Abut.	Pier 1	Pier 2	N. Abut.	
R _{DC1}	(k)	15.2	60.2	62.9	17.2
R _{DC2}	(k)	2.7	10.9	11.5	3.0
R _{DW}	(k)	5.8	24.0	25.2	6.7
R _{L + IM}	(k)	69.3	108.6	109.5	71.2
R _{Total}	(k)	93.0	203.7	209.1	98.1

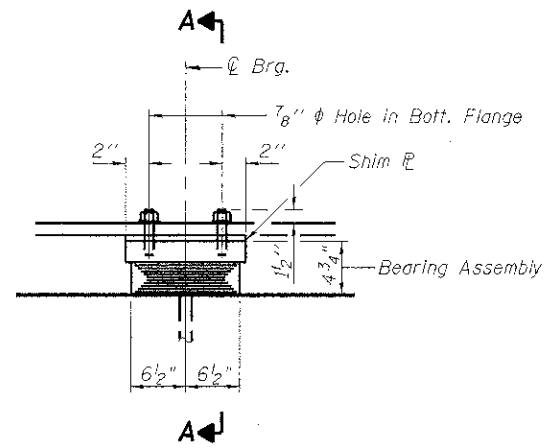
I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in⁴ and in³).

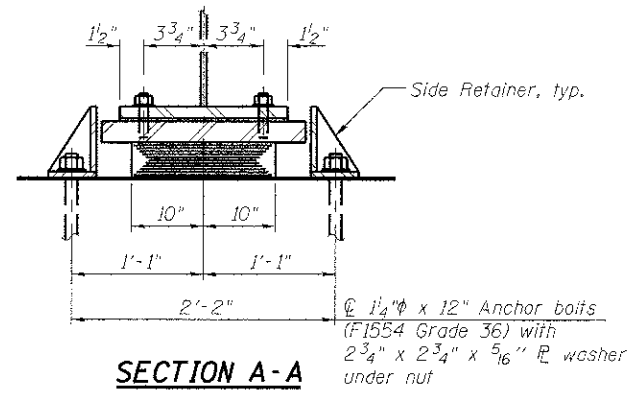
$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite dead loads (in⁴ and in³).

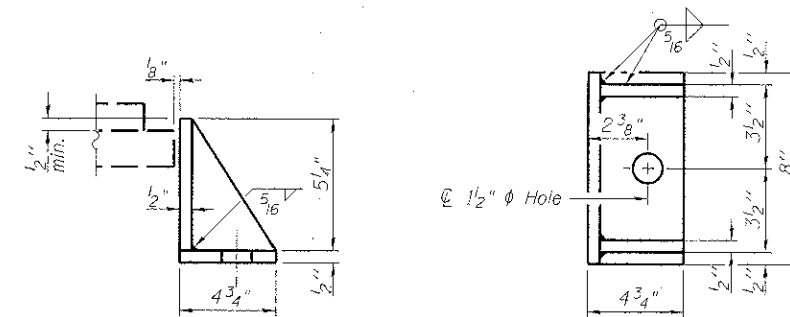
DC1: Un-factored non-composite dead load (kips/ft.).
 M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
 DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
 M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
 DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
 M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
 M_{L + IM}: Un-factored live load moment plus dynamic load allowance (kip-ft.).
 M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{L + IM}$
 φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
 f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_{nc}
 f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.
 f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.
 f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
 $M_{L + IM} / S_c(3n)$ or $M_{L + IM} / S_c(cr)$ as applicable.
 f_s (Service II): Sum of stresses as computed below (ksi).
 $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s(L + IM)$
 0.95R_nF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
 V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



ELEVATION AT PIERS 1 & 2



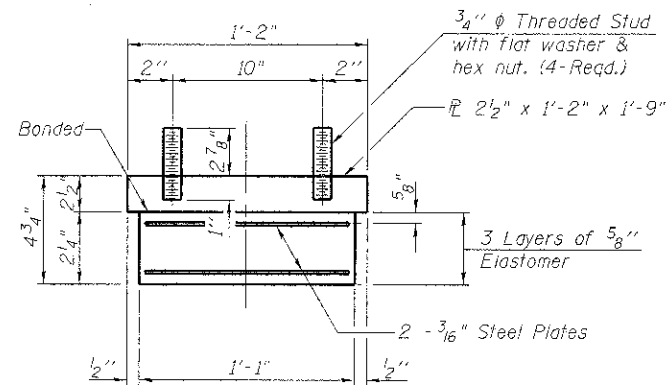
SECTION A-A



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

TYPE I ELASTOMERIC EXP. BRG. - PIERS 1 & 2



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

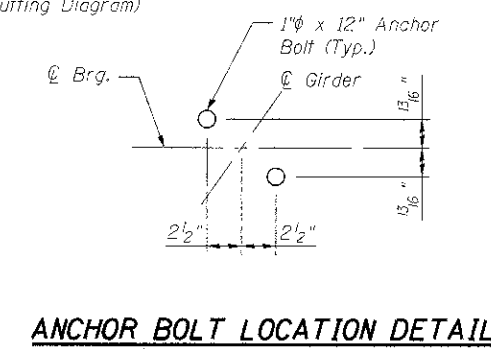
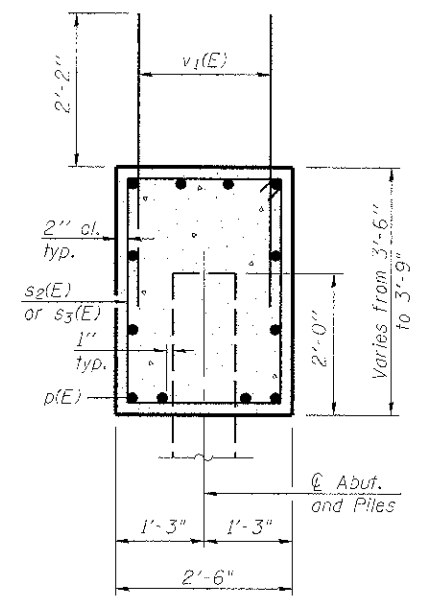
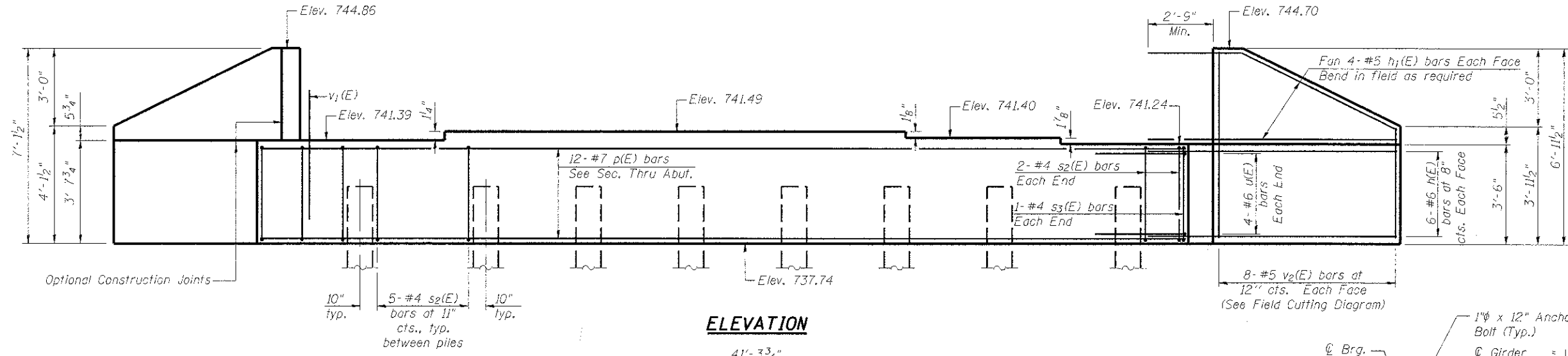
All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Erecting Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, 1 1/4"	Each	24

FILE NAME =	USER NAME = bgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	ELASTOMERIC BEARING DETAILS S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\11\files\110015\05 Plans\Bridge Plans Without Structural Steel\Bearings.dgn	PLOT SCALE = 0.083292 1/4 IN.	CHECKED - RJP	REVISED -			1598	11-00218-00-BR	ADAMS	53	33
PLOT DATE = 11/5/2012		DRAWN - RJP	REVISED -			CONTRACT NO. 93590				
		CHECKED - ADL	REVISED -			SHEET NO. 17 OF 29 SHEETS				

Notes:
 Pour steps monolithically with cap.
 Space reinforcement to miss anchor bolts.



SEC. THRU ABUT.

ANCHOR BOLT LOCATION DETAIL

BILL OF MATERIAL

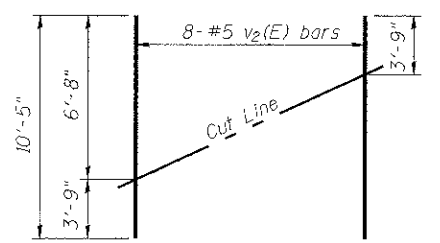
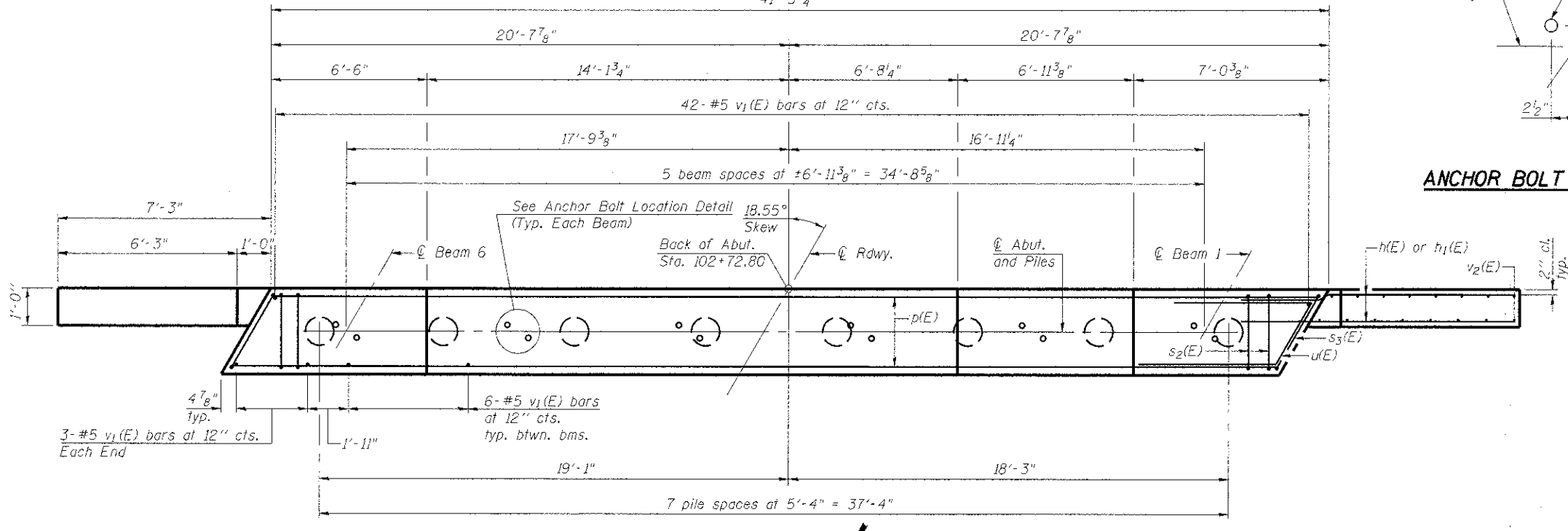
Bar	No.	Size	Length	Shape
h(E)	24	#6	9'-10"	—
h1(E)	16	#5	10'-6"	—
p(E)	12	#7	40'-11"	—
s2(E)	39	#4	11'-5"	□
s3(E)	2	#4	11'-7"	□
u(E)	8	#6	12'-3"	┘
v1(E)	78	#5	4'-4"	—
v2(E)	16	#5	10'-5"	—
Structure Excavation			Cu. Yd.	98
Concrete Structures			Cu. Yd.	17.1
Reinforcement Bars, Epoxy Coated			Pound	2,520
Furnishing Metal Shell Piles 14" x 0.250"			Foot	259
Driving Piles			Foot	259
Test Pile Metal Shells			Each	1

For details of piles, see Sheet 25 of 29.

PILE DATA

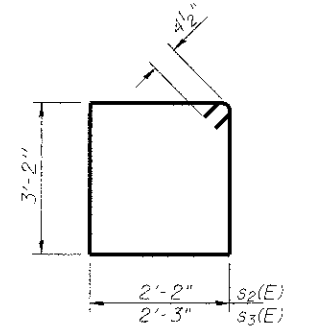
Type: Metal Shell - 14"φ with 0.25" walls
 Nominal Required Bearing: 298 Kips/Pile
 Factored Resistance Available: 164 Kips/Pile
 Est. Length: 37 Ft./Pile
 No. Production Piles: 7
 No. Test Piles: 1*
 * Driven to 110% NRB in production location.

PLAN

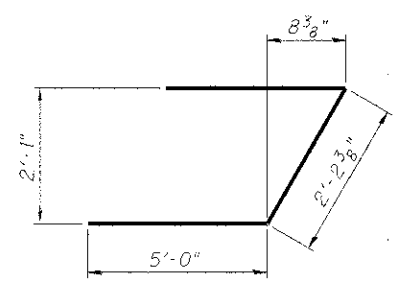


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.

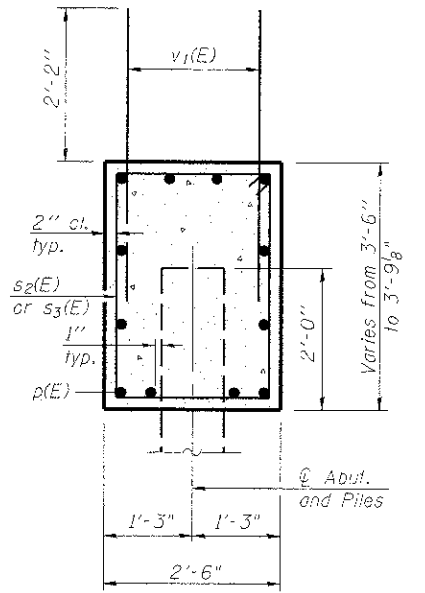
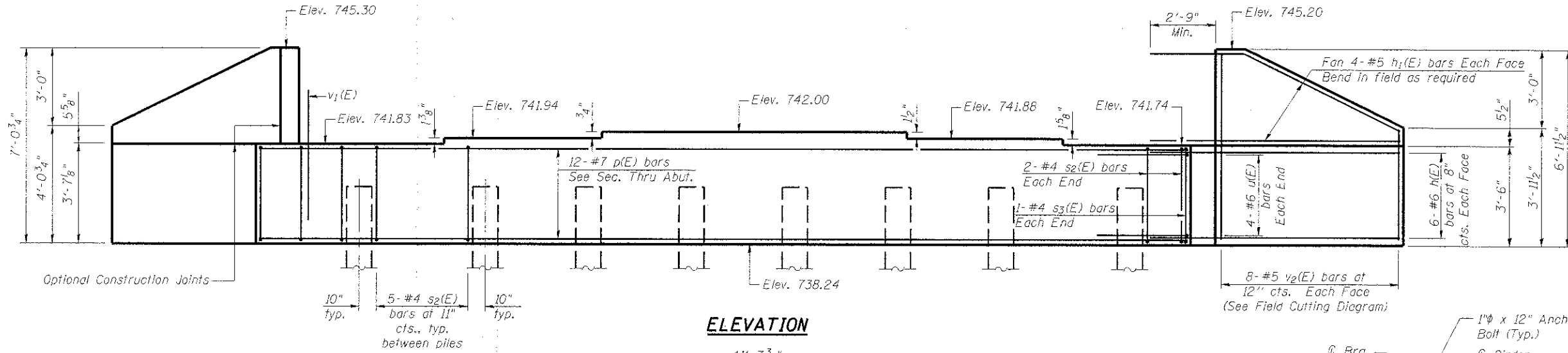


BARS s2(E) & s3(E)

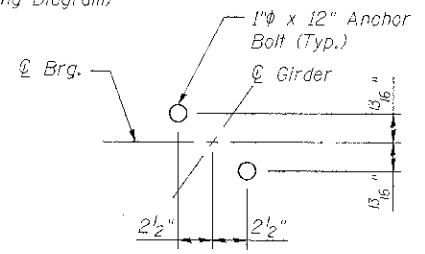


BAR u(E)

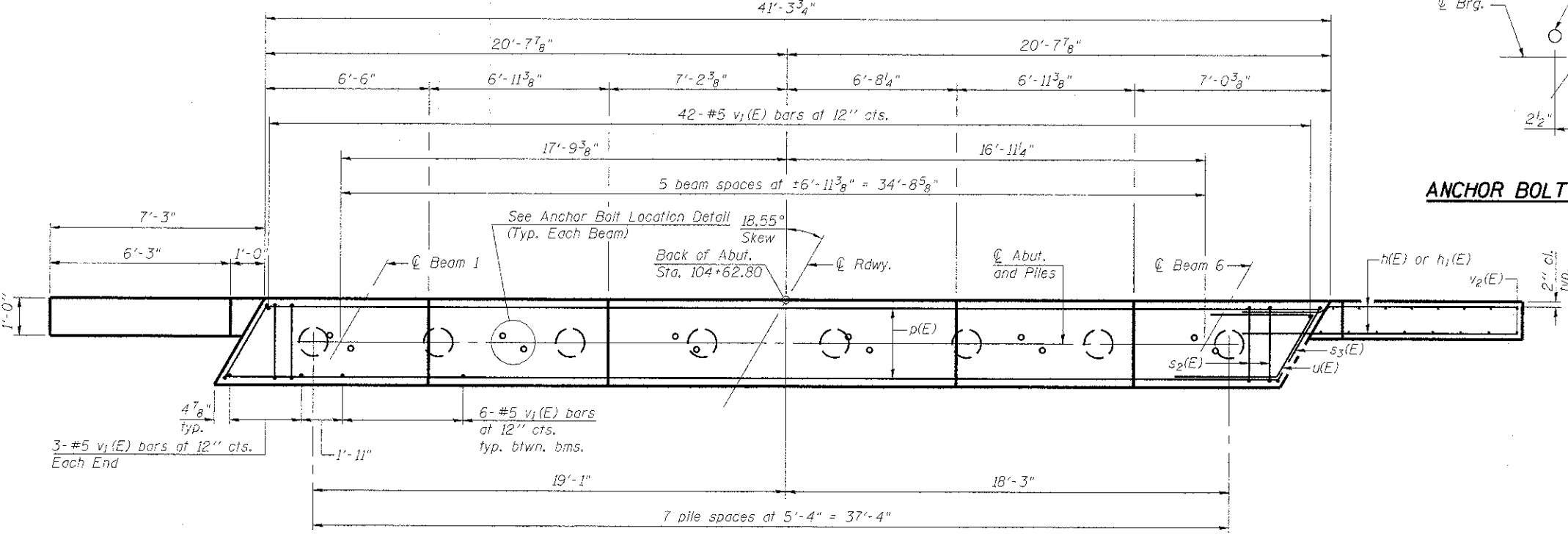
Notes:
 Pour steps monolithically with cap.
 Space reinforcement to miss anchor bolts.



SEC. THRU ABUT.



ANCHOR BOLT LOCATION DETAIL



BILL OF MATERIAL

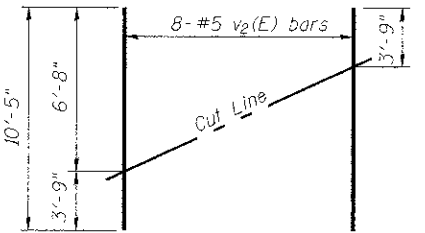
Bar	No.	Size	Length	Shape
h(E)	24	#6	9'-10"	—
h1(E)	16	#5	10'-6"	—
p(E)	12	#7	40'-11"	—
s2(E)	39	#4	11'-5"	□
s3(E)	2	#4	11'-7"	□
u(E)	8	#6	12'-3"	┘
v1(E)	78	#5	4'-4"	—
v2(E)	16	#5	10'-5"	—
Structure Excavation		Cu. Yd.		98
Concrete Structures		Cu. Yd.		17.0
Reinforcement Bars, Epoxy Coated		Pound		2,520
Furnishing Metal Shell Piles 14" x 0.250"		Foot		315
Driving Piles		Foot		315
Test Pile Metal Shells		Each		1

For details of piles, see Sheet 25 of 29.

PILE DATA

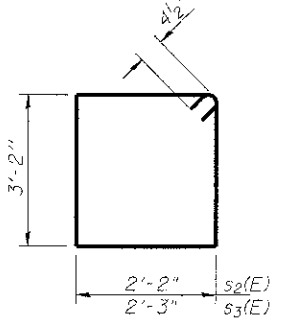
Type: Metal Shell - 14"φ with 0.25" walls
 Nominal Required Bearing: 332 Kips/Pile
 Factored Resistance Available: 183 Kips/Pile
 Est. Length: 45 Ft./Pile
 No. Production Piles: 7
 No. Test Piles: 1*

* Driven to 110% NRB in production location.

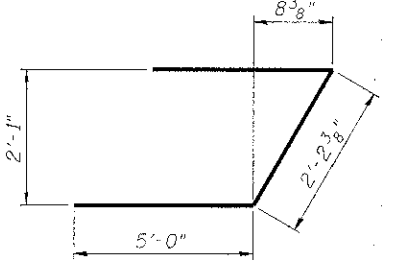


FIELD CUTTING DIAGRAM

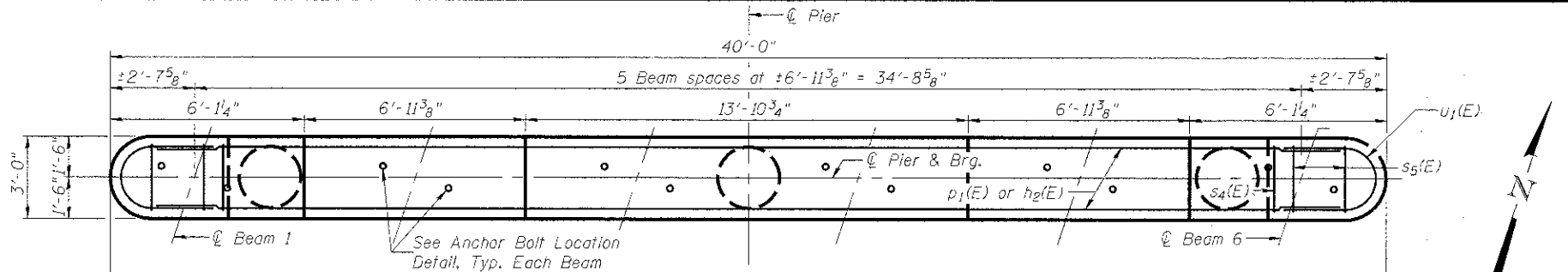
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)



TOP PLAN

Notes:
 Work this sheet with Sheet 21 of 29.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see Sheet 25 of 29.
 Shim plates shall not be placed under Bearing Assembly.
 When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.

PILE DATA

Type: Metal Shell - 12"φ with 0.250" walls
 Nominal Required Bearing: 316 Kips/Pile
 Factored Resistance Available: 174 Kips/Pile
 Est. Length: 30 Ft./Pile
 No. Production Piles: 13
 No. Test Piles: 1*

* Driven to 110% NRB in production location.

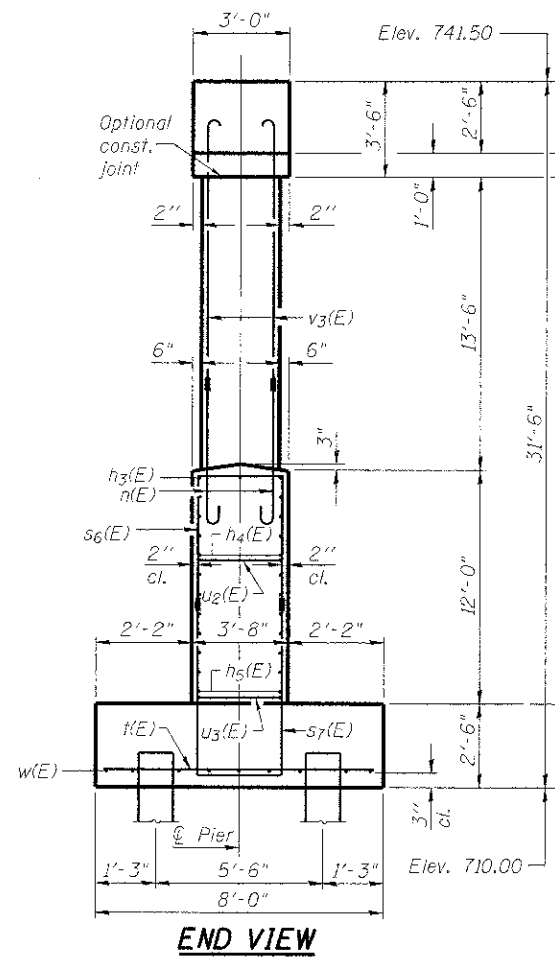
MINIMUM BAR LAP

#6 bar = 3'-10"

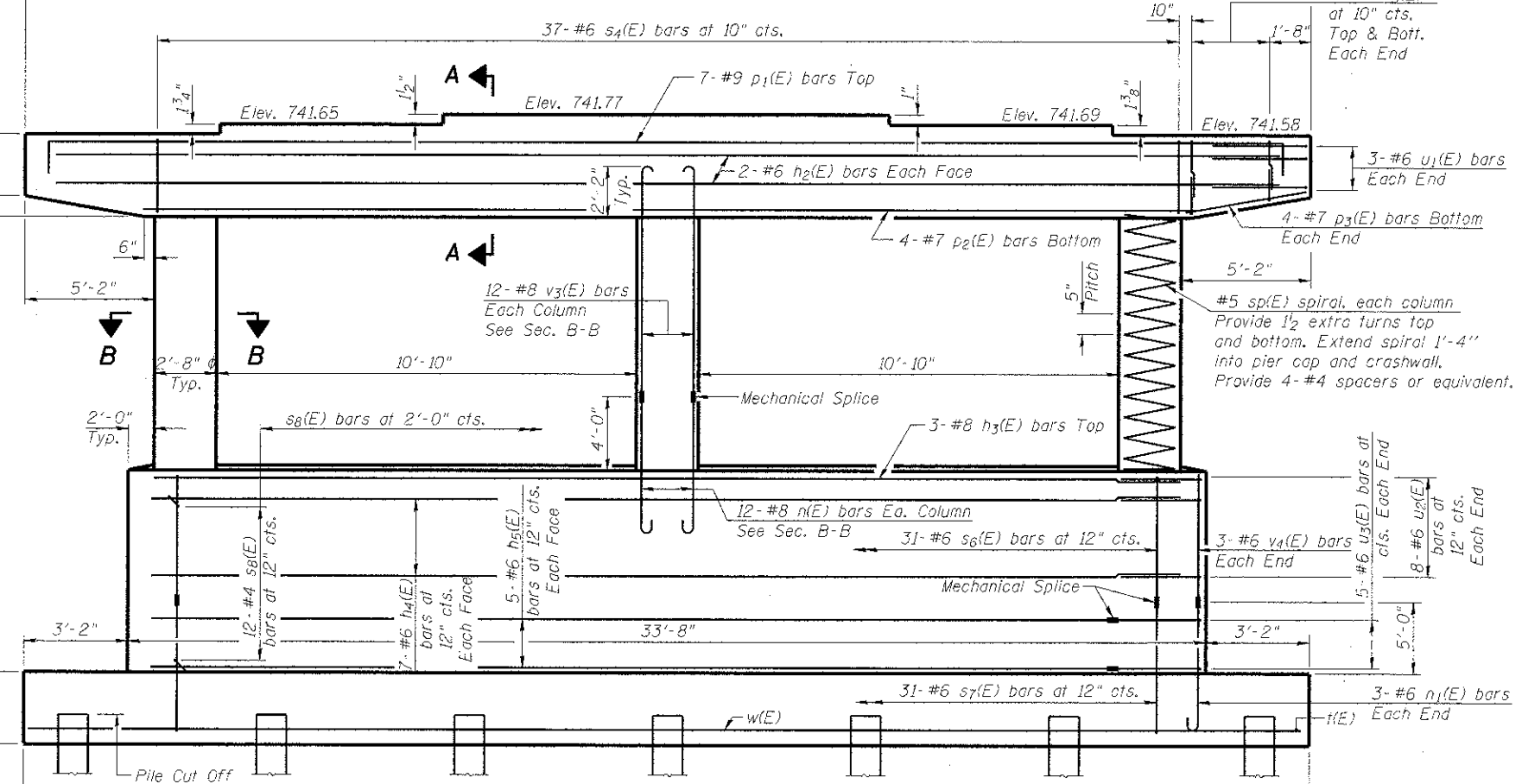
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2(E)	4	#6	35'-0"	—
h3(E)	3	#8	28'-0"	—
h4(E)	14	#6	28'-0"	—
h5(E)	10	#6	20'-0"	—
n(E)	36	#8	7'-1"	U
n1(E)	6	#6	7'-11"	U
p1(E)	7	#9	40'-2"	—
p2(E)	4	#7	30'-8"	—
p3(E)	8	#7	4'-7"	—
s4(E)	37	#6	13'-0"	□
s5(E)	16	#6	7'-8"	□
s6(E)	31	#6	16'-10"	U
s7(E)	31	#6	17'-10"	U
s8(E)	192	#4	4'-5"	—
sp(E)	3	#5	16'-2"	W
t(E)	40	#7	7'-8"	—
u1(E)	6	#6	14'-0"	—
u2(E)	16	#6	17'-0"	—
u3(E)	10	#6	15'-0"	—
v3(E)	36	#8	12'-7"	U
v4(E)	6	#6	6'-9"	—
w(E)	9	#6	39'-8"	—
Structure Excavation		Cu. Yd.	117	
Concrete Structures		Cu. Yd.	108.1	
Reinforcement Bars, Epoxy Coated		Pound	10,770	
Furnishing Metal Shell Piles 12" x 0.250"		Foot	390	
Driving Piles		Foot	390	
Test Pile Metal Shells		Each	1	
Mechanical Splicers		Each	124	

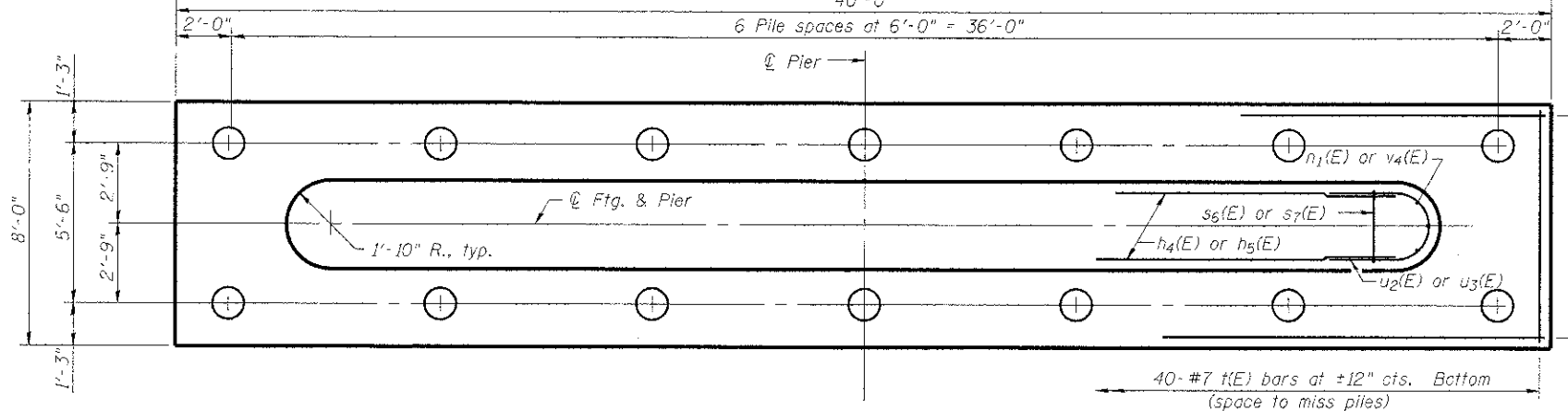
** Length is height of spiral.



END VIEW

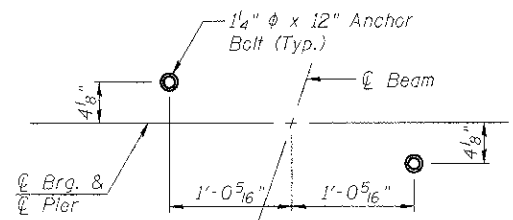


ELEVATION
(Looking North)

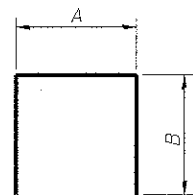


FOOTING PLAN

(Sheet 1 of 2)



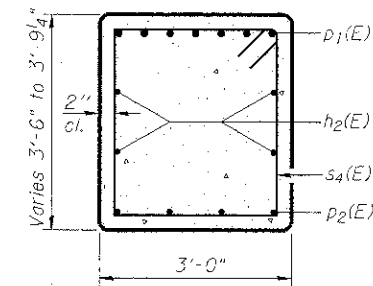
ANCHOR BOLT LOCATION DETAIL



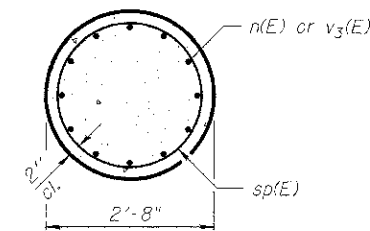
s5(E), s6(E) & s7(E) BARS

A & B DIMENSIONS

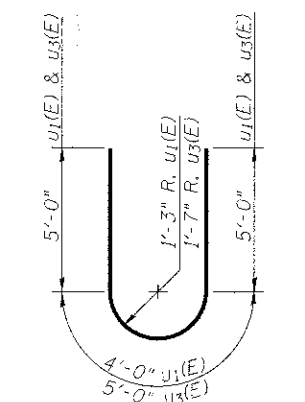
Bar	A	B
s5(E)	2'-8"	2'-6"
s6(E)	3'-4"	6'-9"
s7(E)	3'-4"	7'-3"



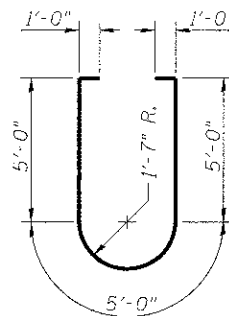
SEC. A-A



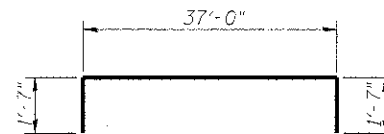
SEC. B-B



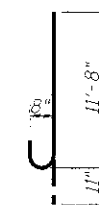
BARS u1(E) & u3(E)



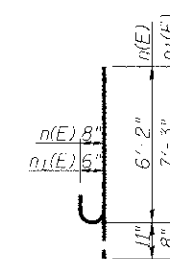
BAR u2(E)



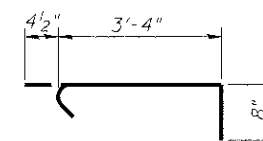
BAR p1(E)



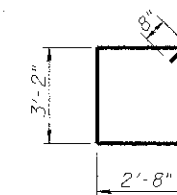
BAR v3(E)



BARS n(E) & n1(E)



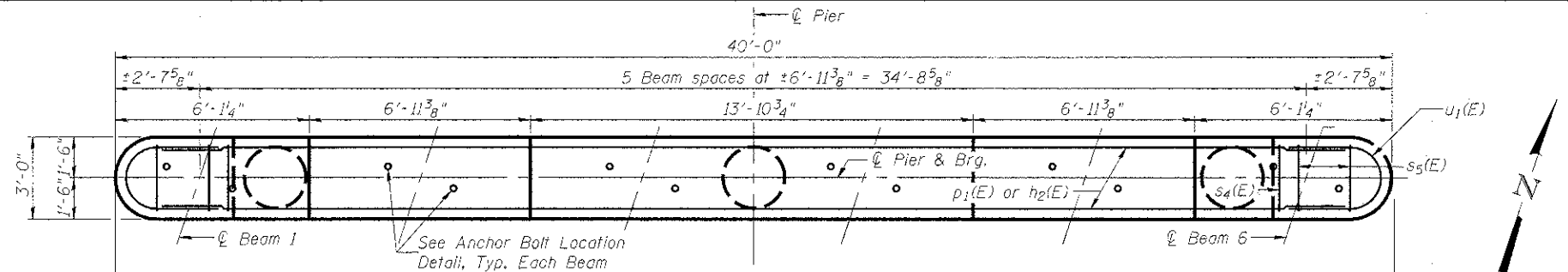
BAR s8(E)



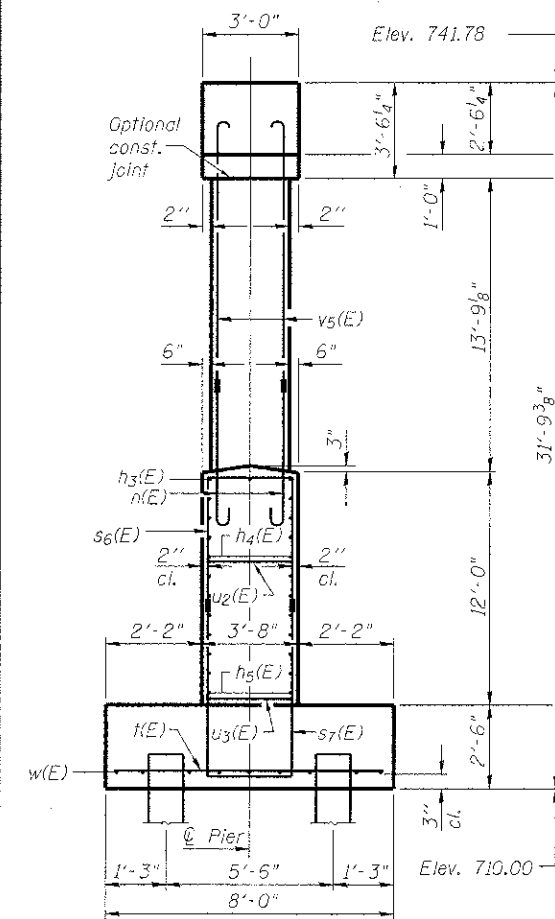
BAR s4(E)

(Sheet 2 of 2)

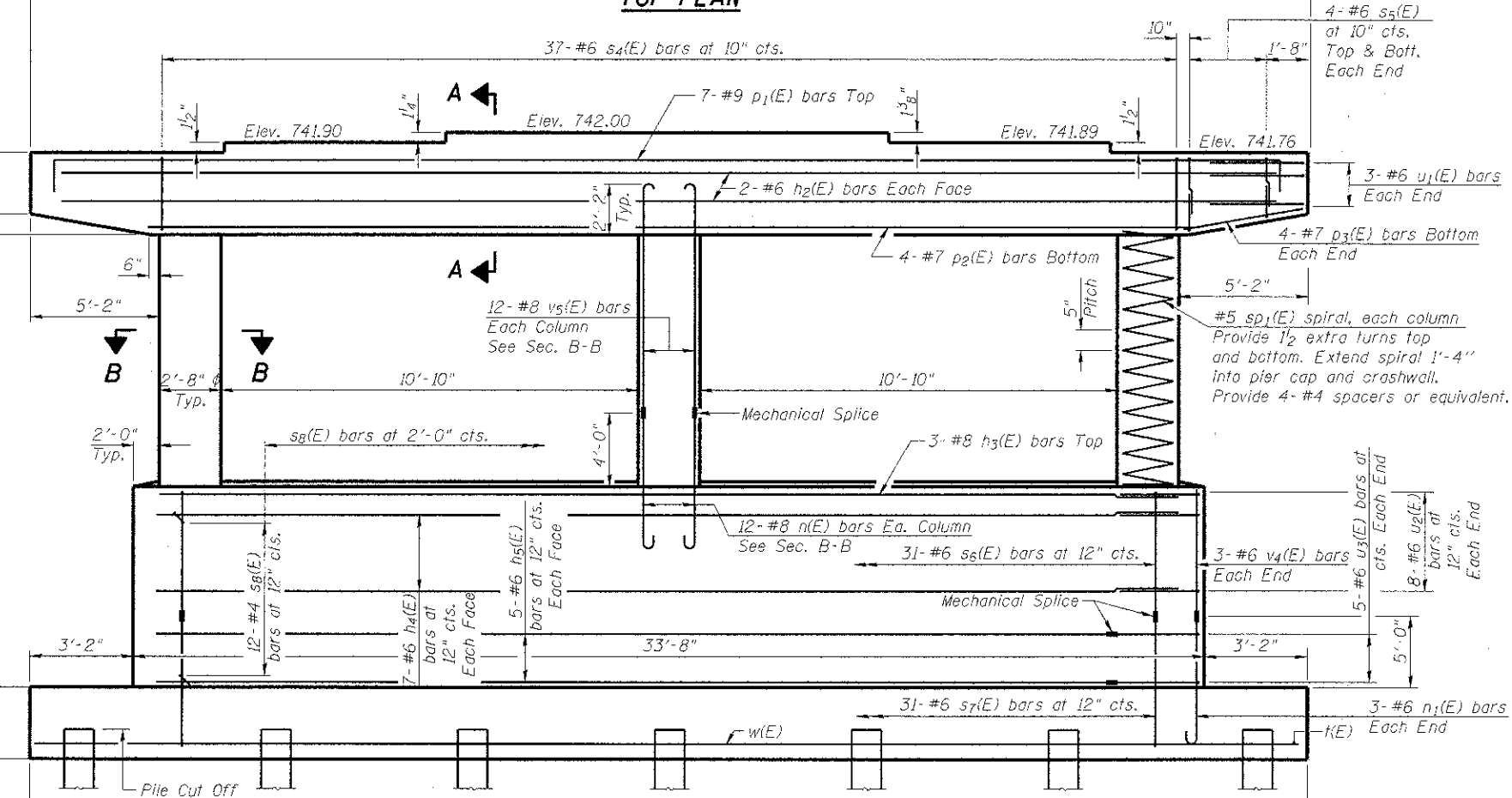
FILE NAME =	USER NAME = hgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	PIER 1 DETAILS S.N. 001-3338	F.A.P. RTE. 1598	SECTION 11-00218-00-BR	COUNTY ADAMS	TOTAL SHEETS 53	SHEET NO. 37	
D:\11\files\110215\05 Plans\Bridges Plans Without Structural Steel\PIERS.ogn		CHECKED - RJP	REVISED -			SHEET NO. 21 OF 29 SHEETS		CONTRACT NO. 93530		ILLINOIS FED. AID PROJECT	
PLOT SCALE = 0.083262 / / IN.		DRAWN - RJP	REVISED -			Klingner & Associates P.C.					
PLOT DATE = 11/5/2012		CHECKED - ADL	REVISED -								



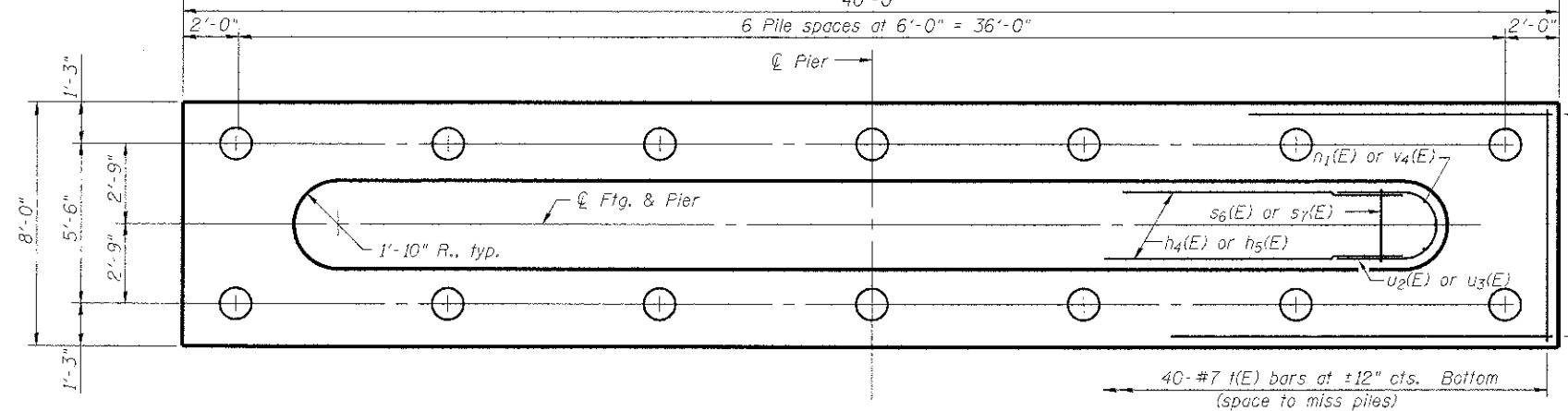
TOP PLAN



END VIEW



ELEVATION
(Looking North)



FOOTING PLAN

Notes:
 Work this sheet with Sheet 23 of 29.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see Sheet 25 of 29.
 Shim plates shall not be placed under Bearing Assembly.
 When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.

PILE DATA

Type: Metal Shell - 12"Ø with 0.250" walls
 Nominal Required Bearing: 332 Kips/Pile
 Factored Resistance Available: 183 Kips/Pile
 Est. Length: 39 Ft./Pile
 No. Production Piles: 13
 No. Test Piles: 1*

MINIMUM BAR LAP

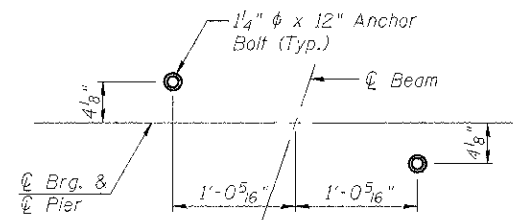
#6 bar = 3'-10"

BILL OF MATERIAL

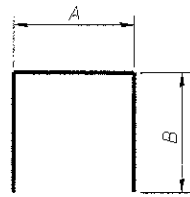
Bar	No.	Size	Length	Shape
h2(E)	4	#6	35'-0"	—
h3(E)	3	#8	28'-0"	—
h4(E)	14	#6	28'-0"	—
h5(E)	10	#6	20'-0"	—
n(E)	36	#8	7'-1"	U
n1(E)	6	#6	7'-11"	U
p1(E)	7	#9	40'-2"	—
p2(E)	4	#7	30'-8"	—
p3(E)	8	#7	4'-7"	—
s4(E)	37	#6	13'-0"	□
s5(E)	16	#6	7'-8"	□
s6(E)	31	#6	16'-10"	U
s7(E)	31	#6	17'-10"	U
s8(E)	192	#4	4'-5"	U
sp1(E)	3	#5	16'-5"	W
t(E)	40	#7	7'-8"	—
u1(E)	6	#6	14'-0"	U
u2(E)	16	#6	17'-0"	U
u3(E)	10	#6	15'-0"	U
v4(E)	6	#6	5'-9"	—
v5(E)	36	#8	12'-10"	U
w(E)	9	#6	39'-8"	—
Structure Excavation		Cu. Yd.	117	
Concrete Structures		Cu. Yd.	108.2	
Reinforcement Bars, Epoxy Coated		Pound	10,810	
Furnishing Metal Shell Piles 12" x 0.250"		Foot	507	
Driving Piles		Foot	507	
Test Pile Metal Shells		Each	1	
Mechanical Splicers		Each	124	

** Length is height of spiral.

(Sheet 1 of 2)



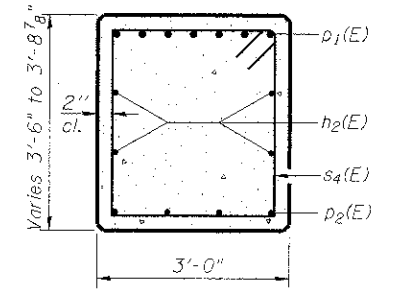
ANCHOR BOLT LOCATION DETAIL



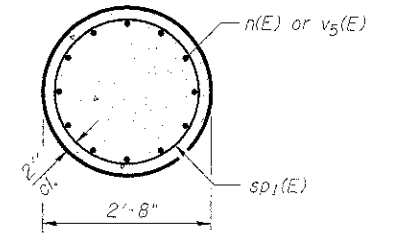
s₅(E), s₆(E) & s₇(E) BARS

A & B DIMENSIONS

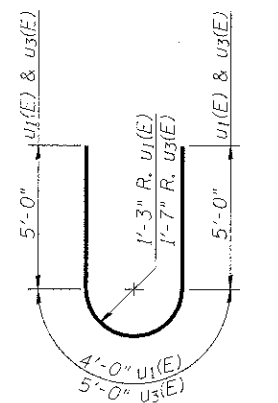
Bar	A	B
s ₅ (E)	2'-8"	2'-6"
s ₆ (E)	3'-4"	6'-9"
s ₇ (E)	3'-4"	7'-3"



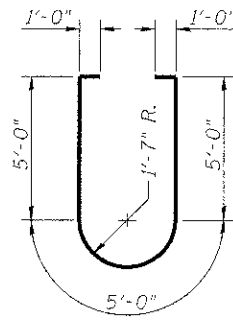
SEC. A-A



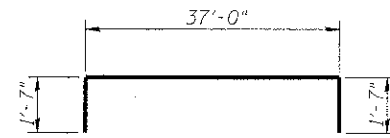
SEC. B-B



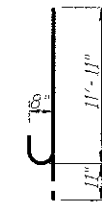
BARS u₁(E) & u₃(E)



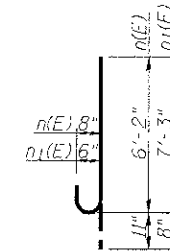
BAR u₂(E)



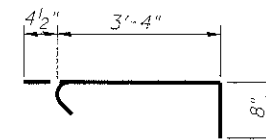
BAR p₁(E)



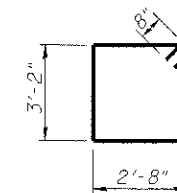
BAR v₅(E)



BARS n(E) & n₁(E)



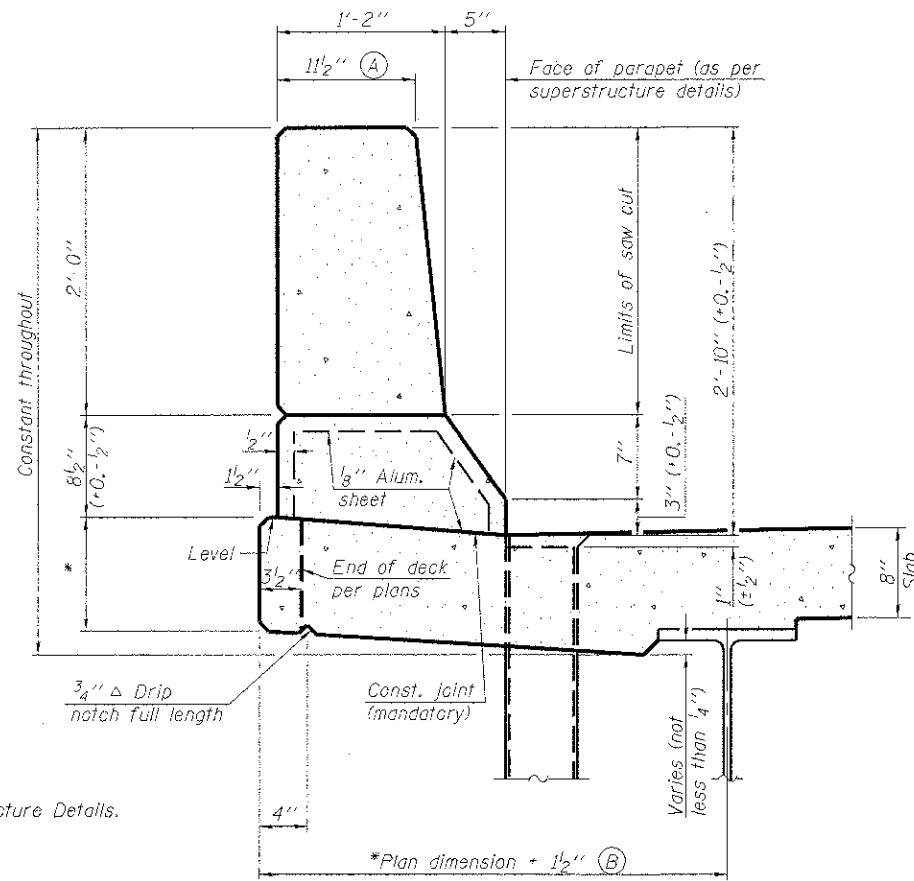
BAR s₈(E)



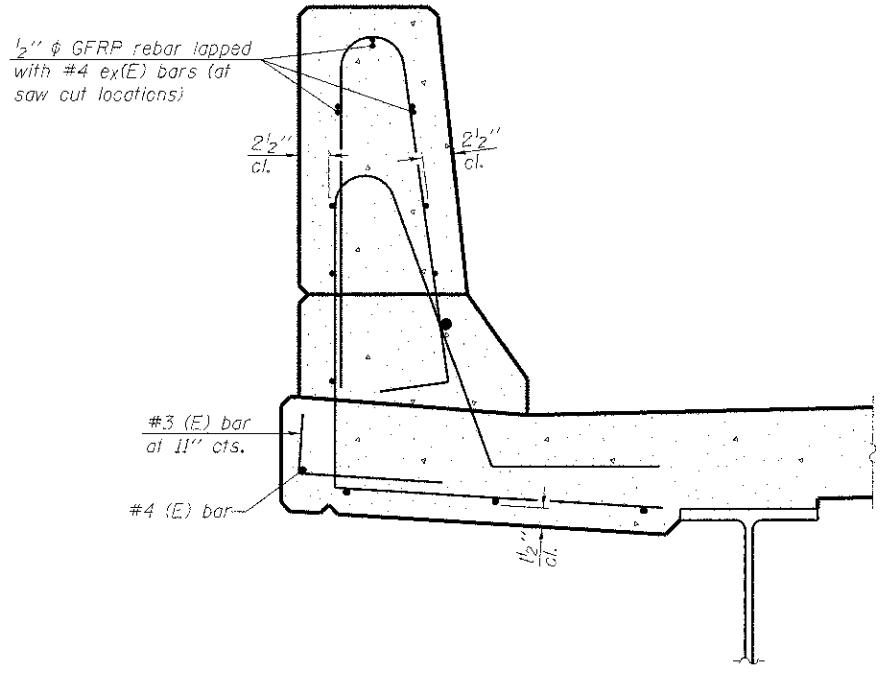
BAR s₄(E)

(Sheet 2 of 2)

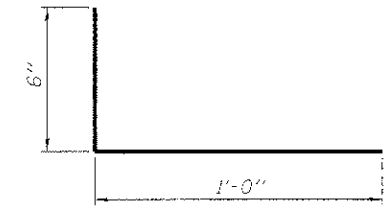
FILE NAME =	USER NAME = bsj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	PIER 2 DETAILS S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\J:\les\110015\05 Plans\Bridge Plans Without Structural Steel\PIERS.dgn	CHECKED - RJP	REVISED -	1598			11-00218-00-BR	ADAMS	53	39	
PLOT SCALE = 0.003262 "/ IN.	DRAWN - RJP	REVISED -	CONTRACT NO. 93590							
PLOT DATE = 11/5/2012	CHECKED - ADL	REVISED -	ILLINOIS FED. AID PROJECT							
					SHEET NO. 23 OF 29 SHEETS		Killingner & Associates P.C.			



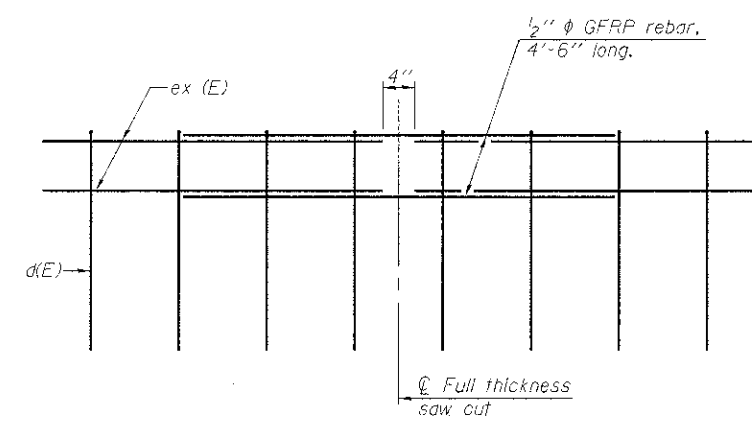
SECTION
(Showing dimensions)



SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

GENERAL NOTES

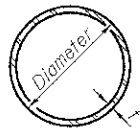
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.
Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.
Steel superstructure shown. Other superstructure types similar.

* See Superstructure Details.

SFP-34

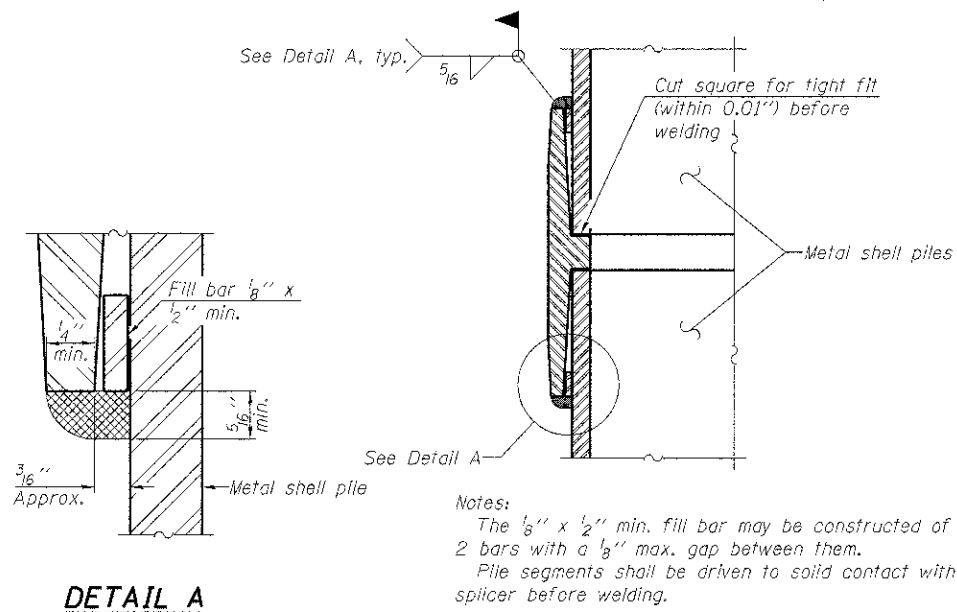
7-1-10

FILE NAME =	USER NAME = bgj	DESIGNED - ADL	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	CONCRETE PARAPET SLIPFORMING OPTION S.N. 001-3338	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
G:\11\Jes\110215\09 Plans\8-bridge Plans Without Structural Steel\Concrete Parapet Slip	CHECKED - tomagn RJP	REVISOR -	REVISOR -			1598	11-00218-00-BR	ADAMS	53	40
PLOT SCALE = 3/8" = 1' IN.	DRAWN - RJP	REVISOR -	REVISOR -			CONTRACT NO. 93500				
PLOT DATE = 11/5/2012	CHECKED - ADL	REVISOR -	REVISOR -			SHEET NO. 24 OF 29 SHEETS				



METAL SHELL PILE TABLE

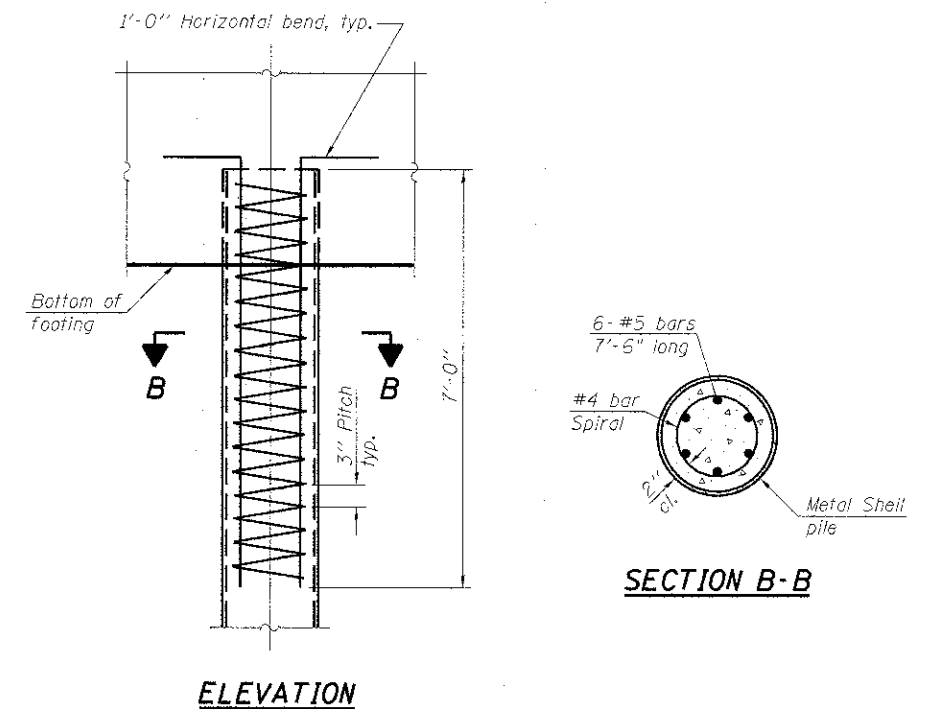
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



DETAIL A

Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.

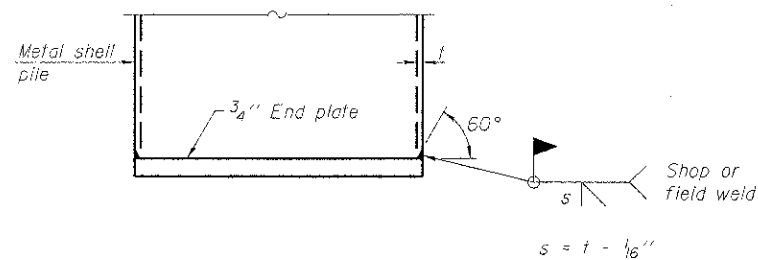
WELDED COMMERCIAL SPLICE



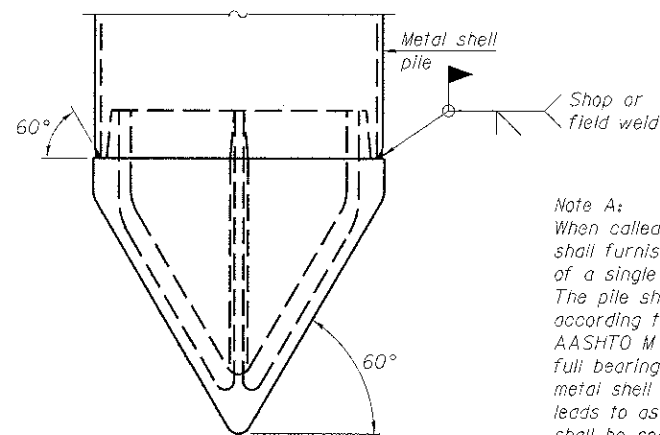
ELEVATION

SECTION B-B

METAL SHELL REINFORCEMENT AT PIERS



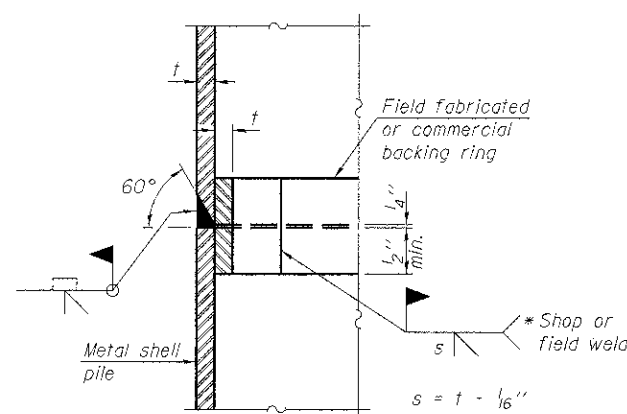
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

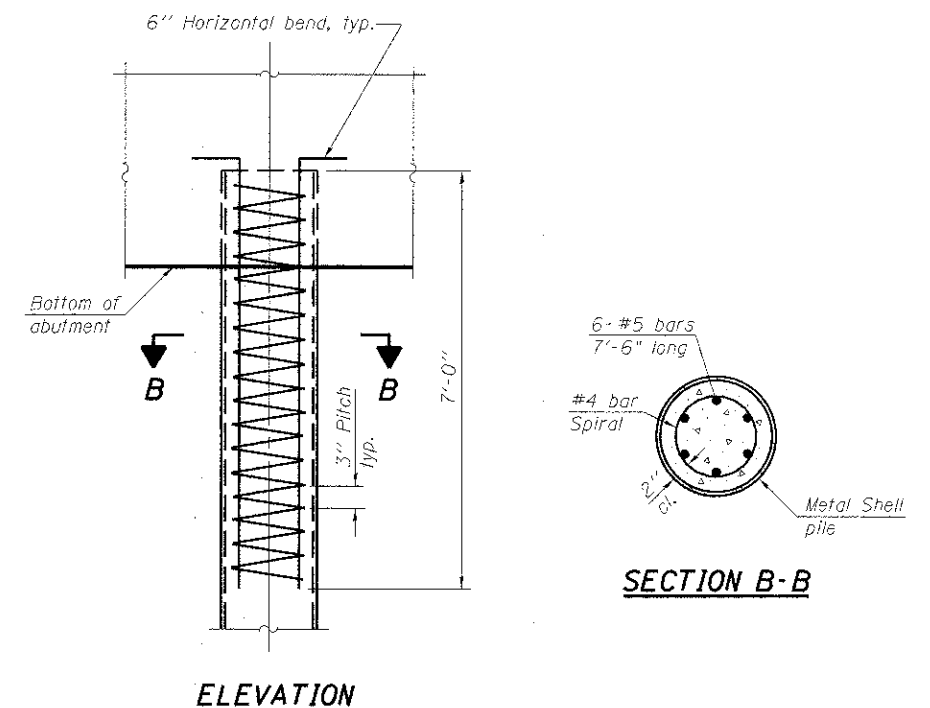
(See Note A)

Note A:
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

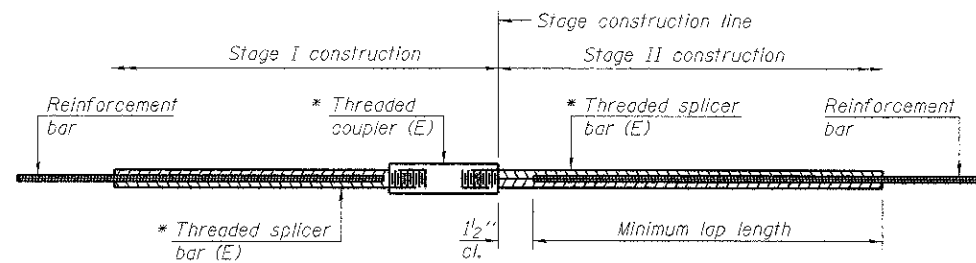


ELEVATION

SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.



STANDARD BAR SPLICER ASSEMBLY

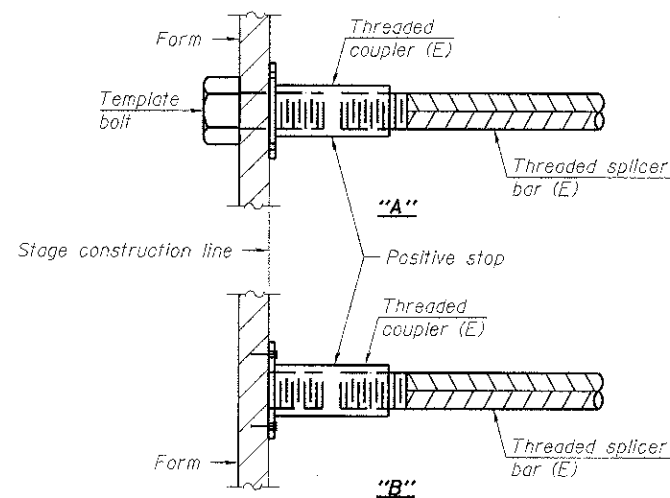
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

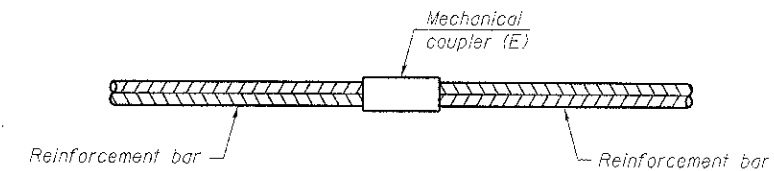
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



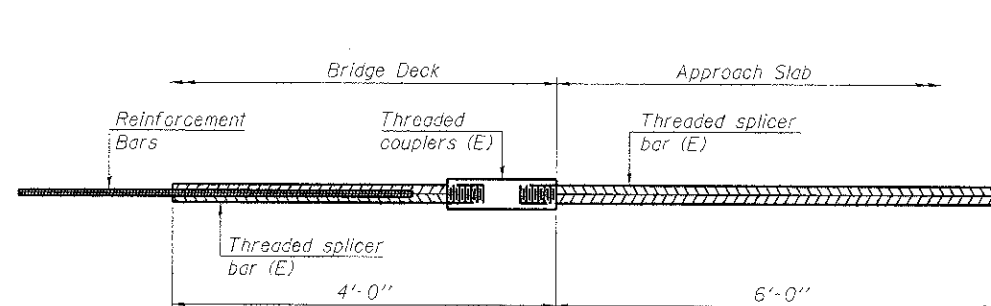
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



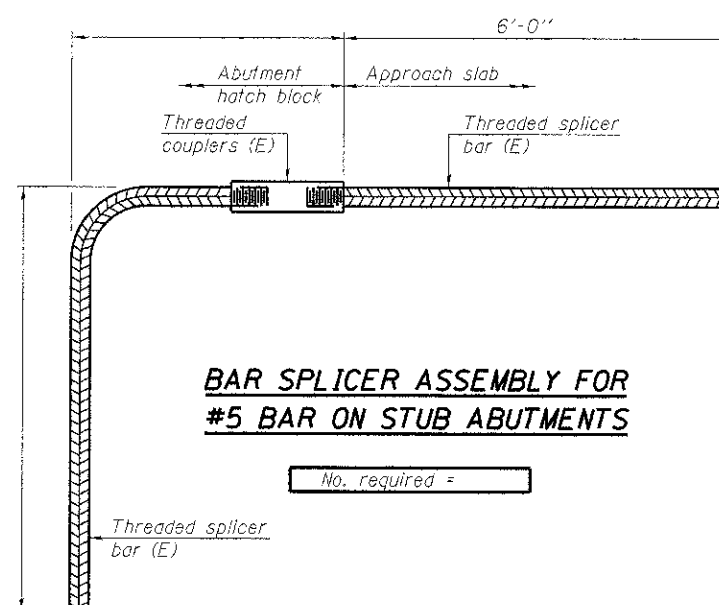
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 1	#6	88
Pier 1	#8	36
Pier 2	#6	88
Pier 2	#8	36



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 84



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

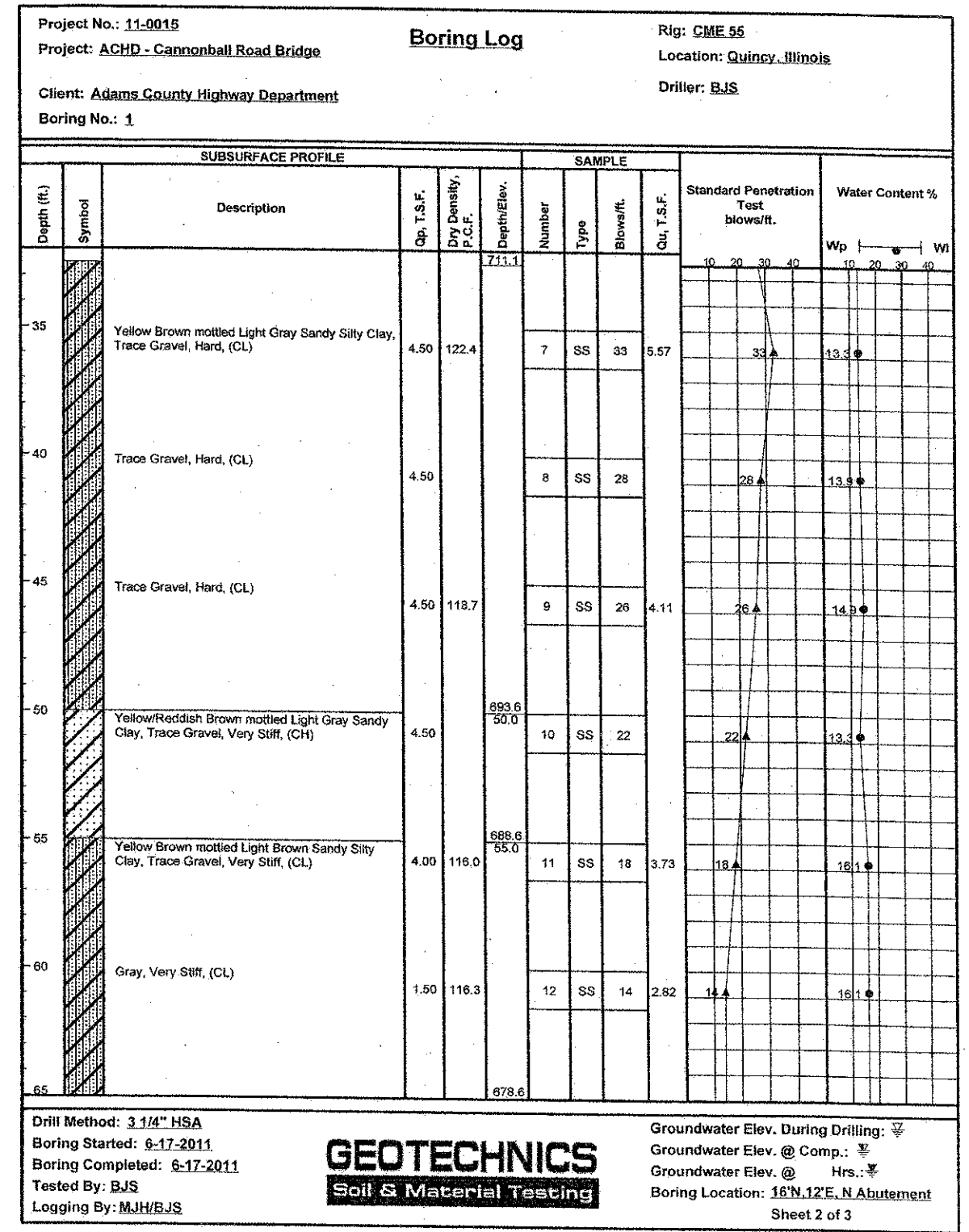
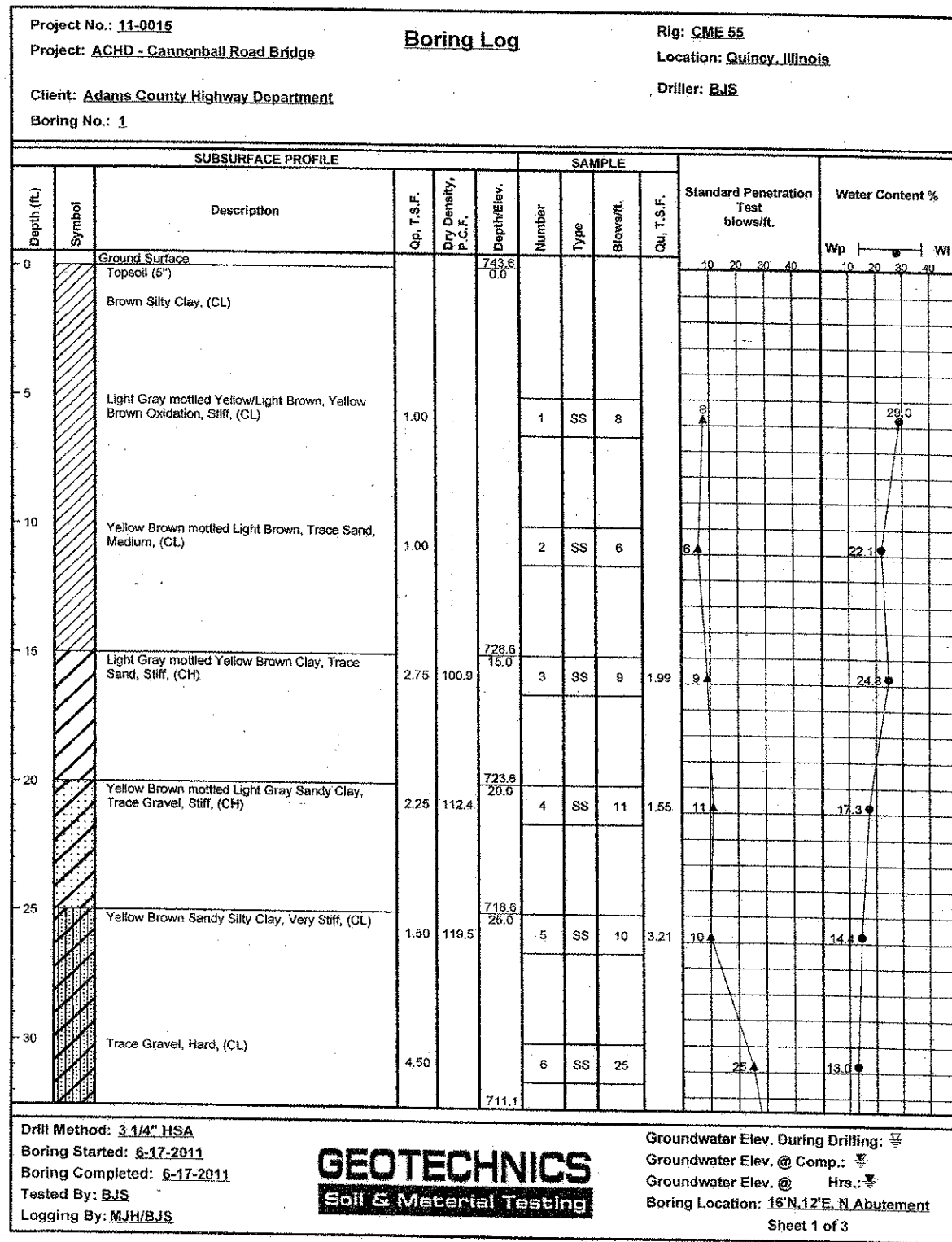
No. required =

NOTES

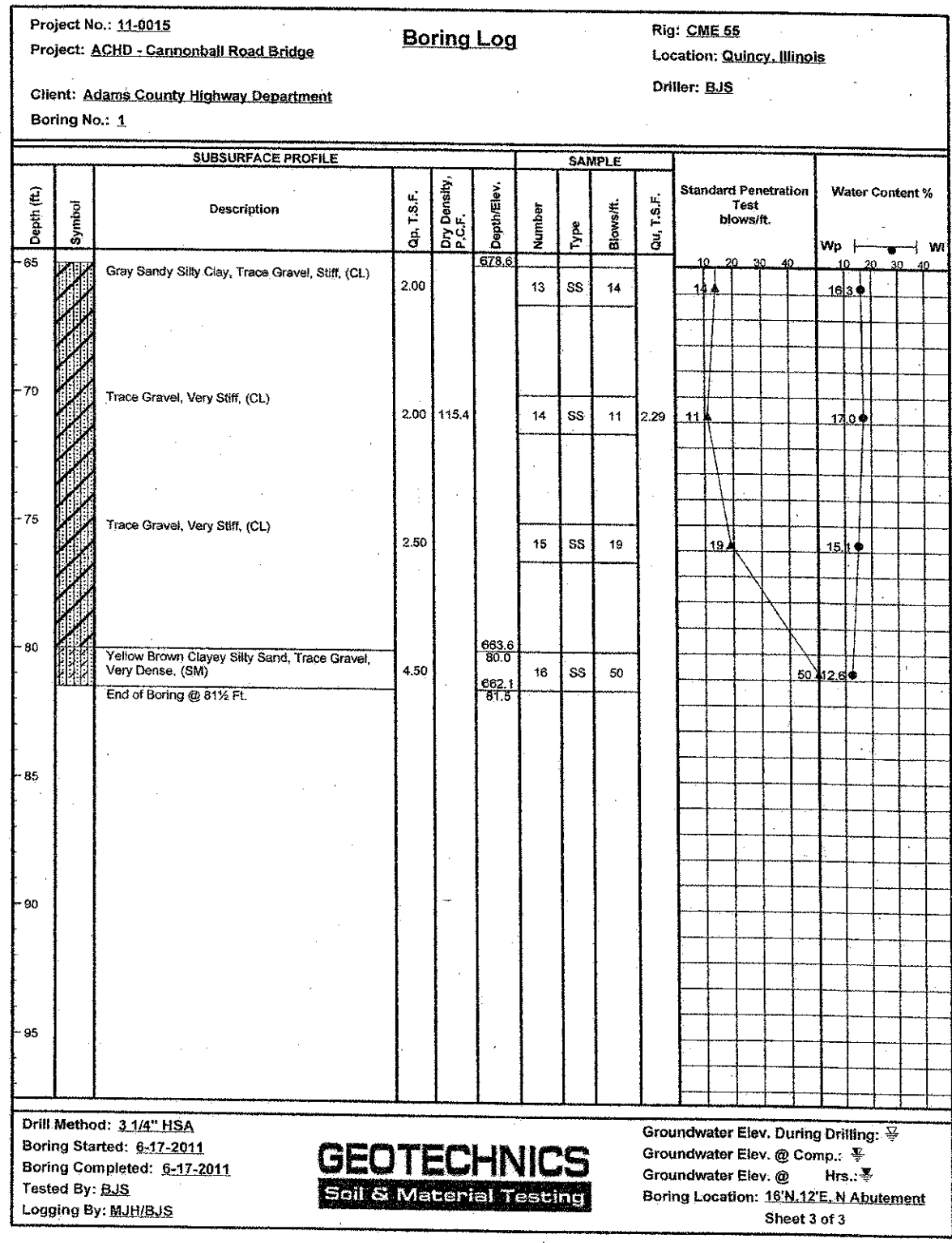
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 7-1-10

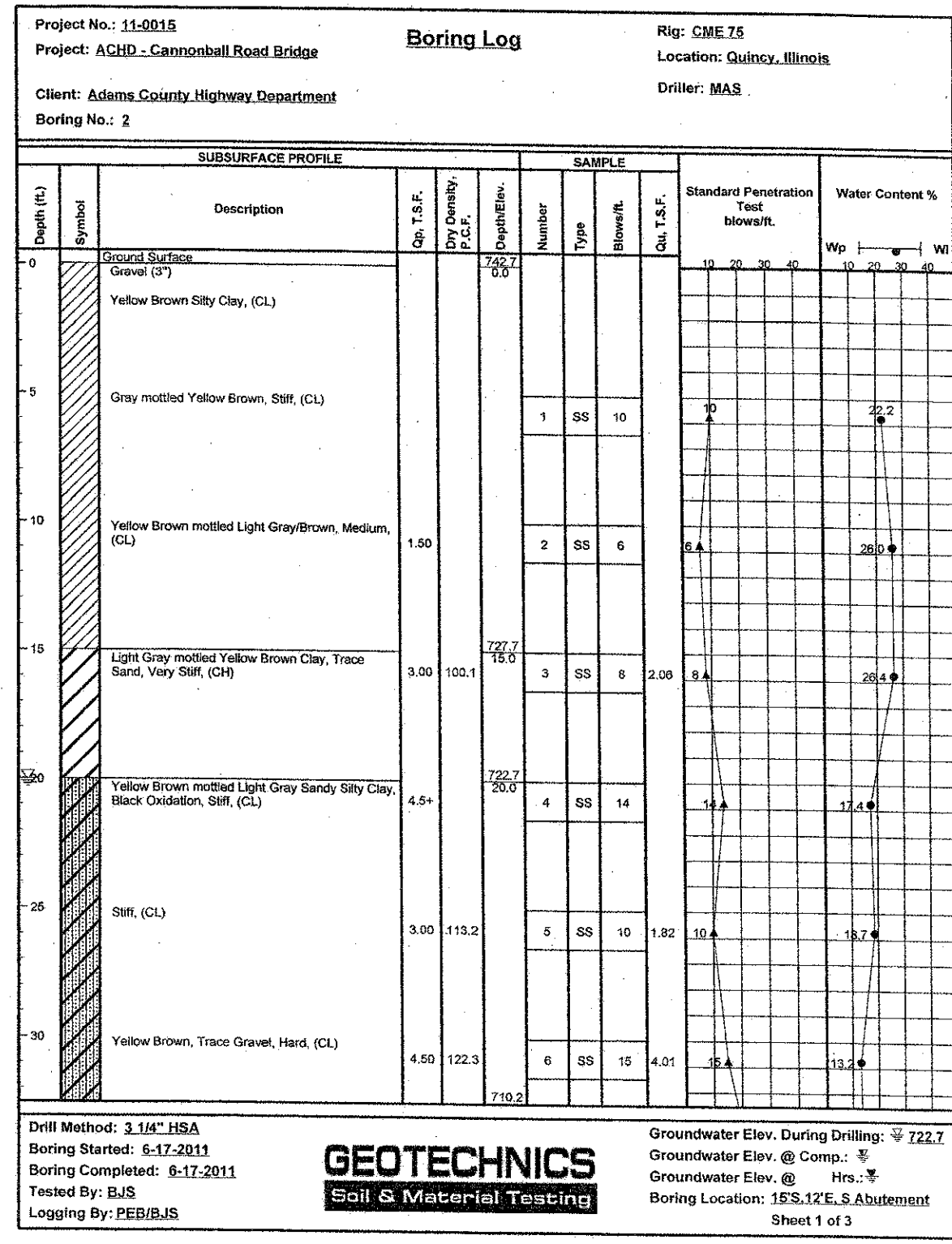
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PLOT SCALE = 0.003200 / 1/4"	PLOT DATE = 11/5/2012	CHECKED - RJP	REVISD -			CONTRACT NO. 93590				
		DRAWN - RJP	REVISD -			SHEET NO. 26 OF 29 SHEETS				
		CHECKED - ADL	REVISD -			ILLINOIS FED. AID PROJECT Klingner & Associates P.C.				



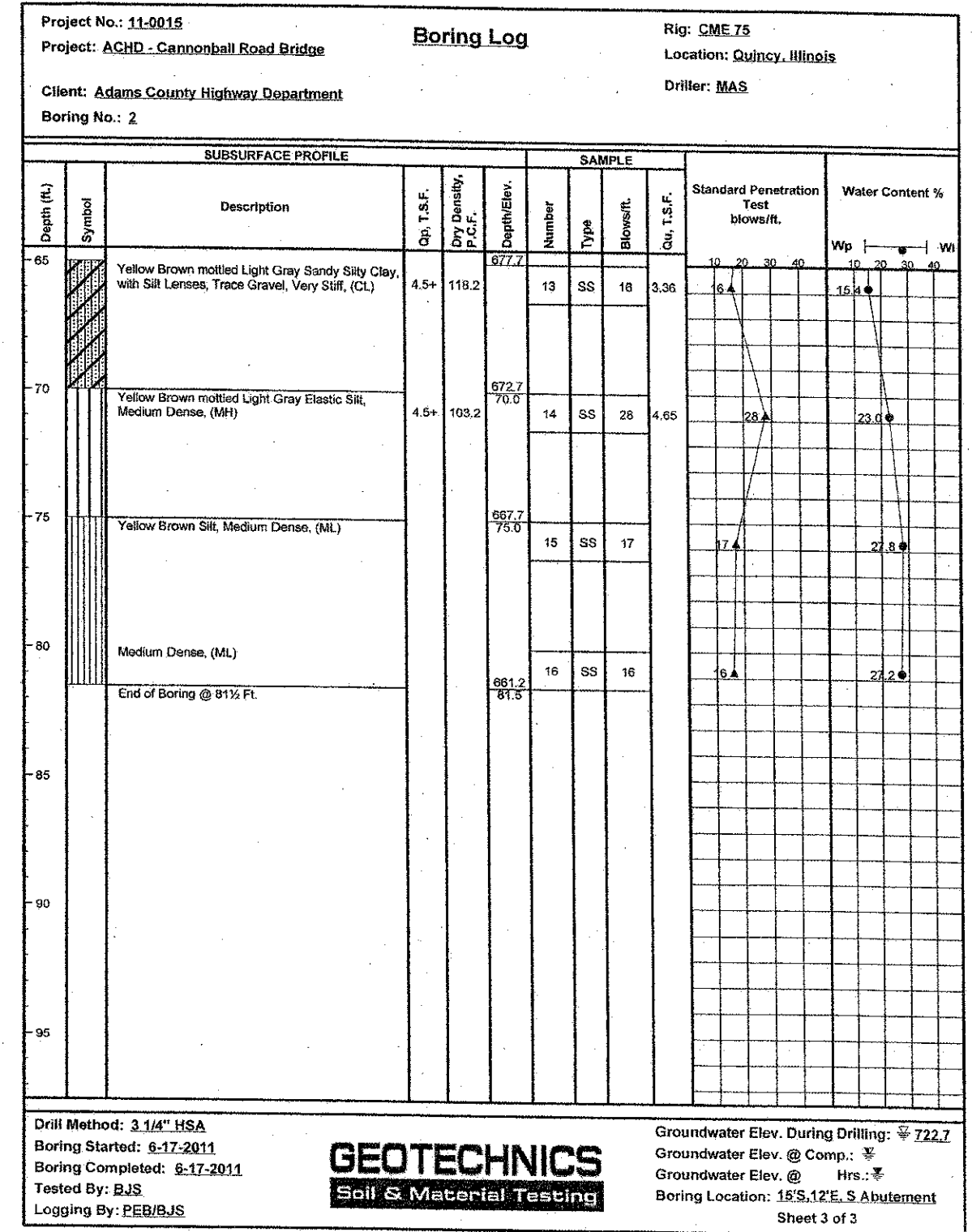
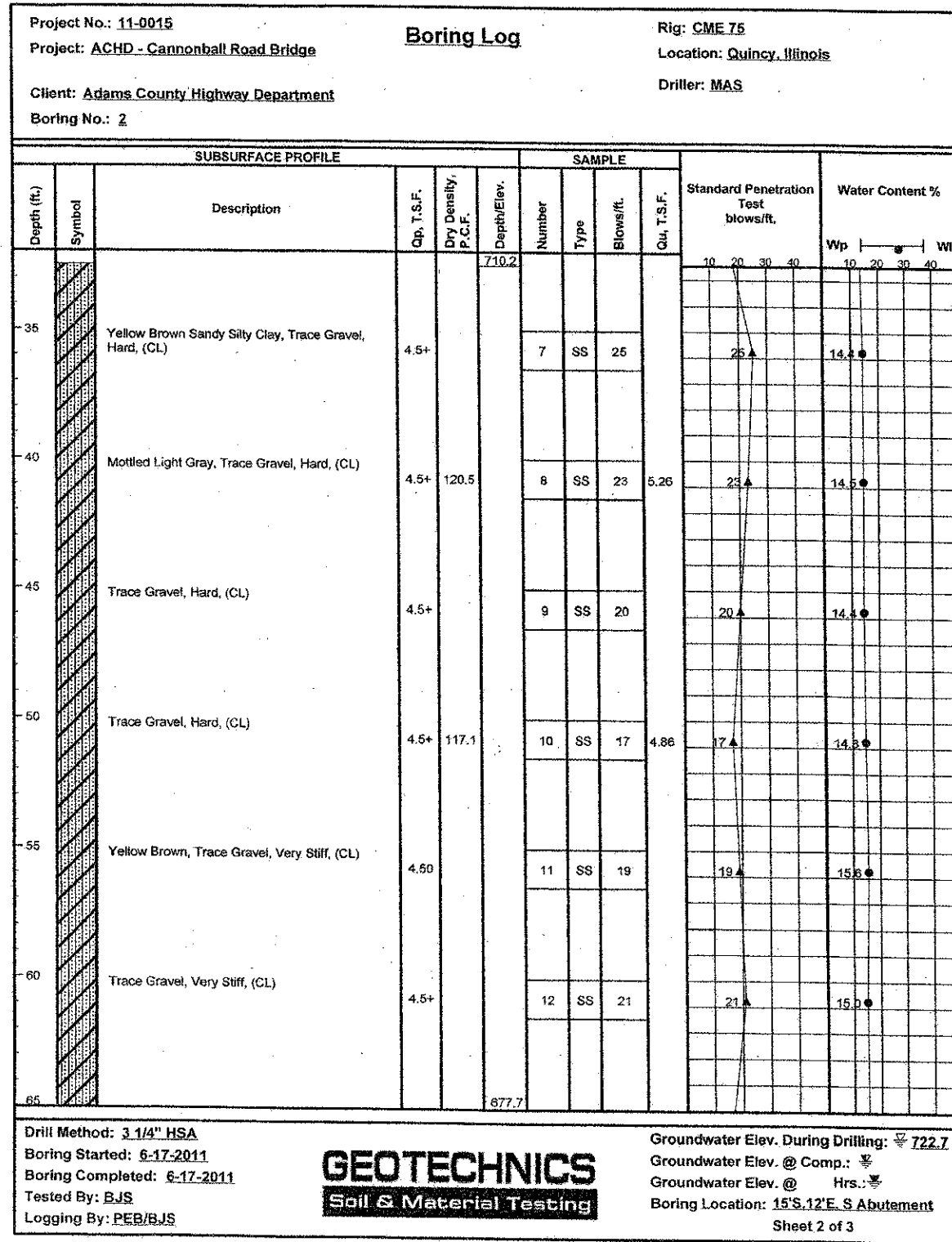
BORING B-1



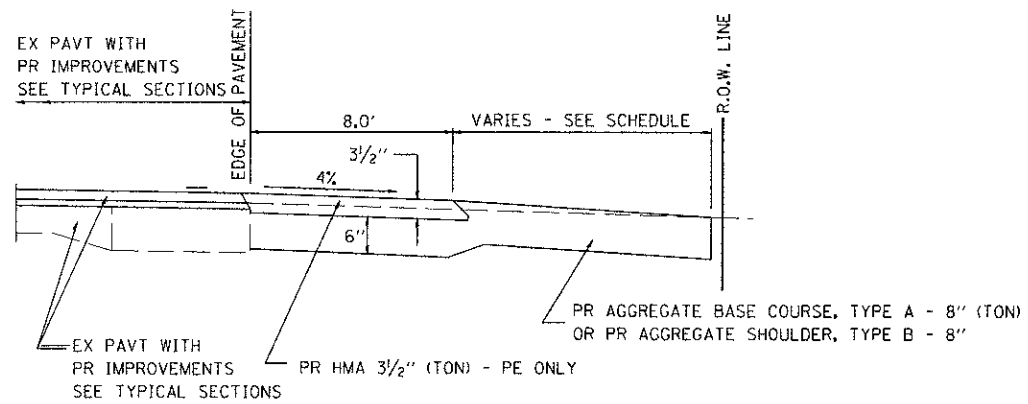
BORING B-1 (CONTINUED)



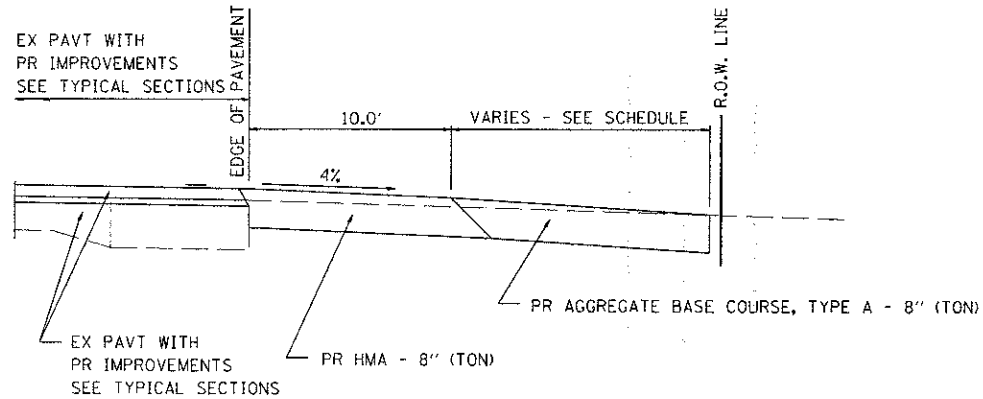
BORING B-2



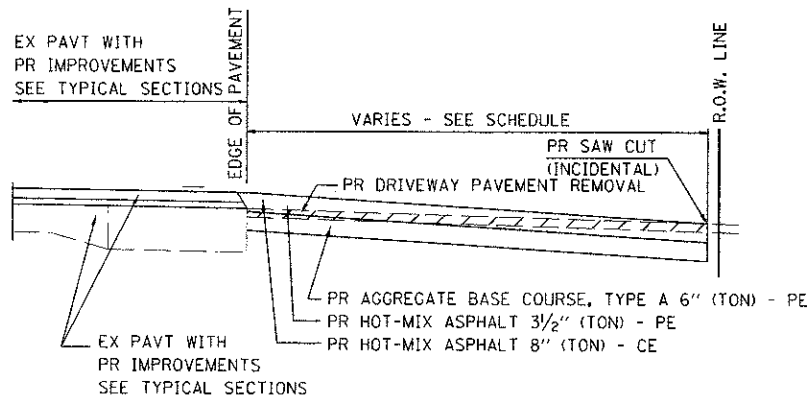
BORING B-2 (CONTINUED)



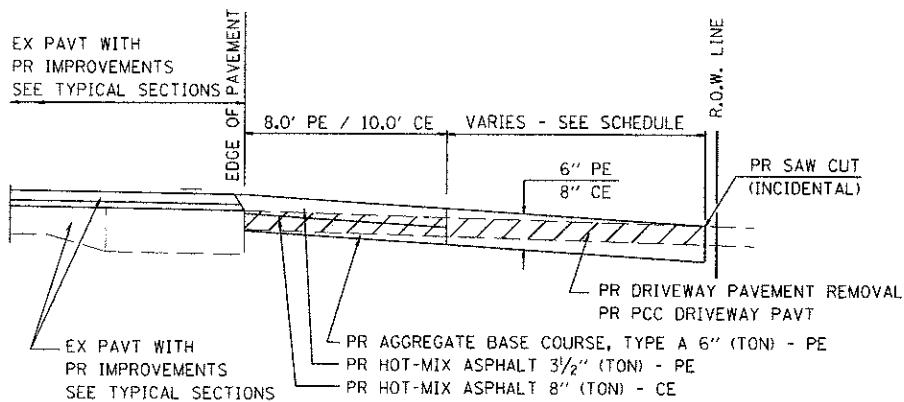
SECTION A-A FOR EX EARTH/AGGREGATE FE & PE



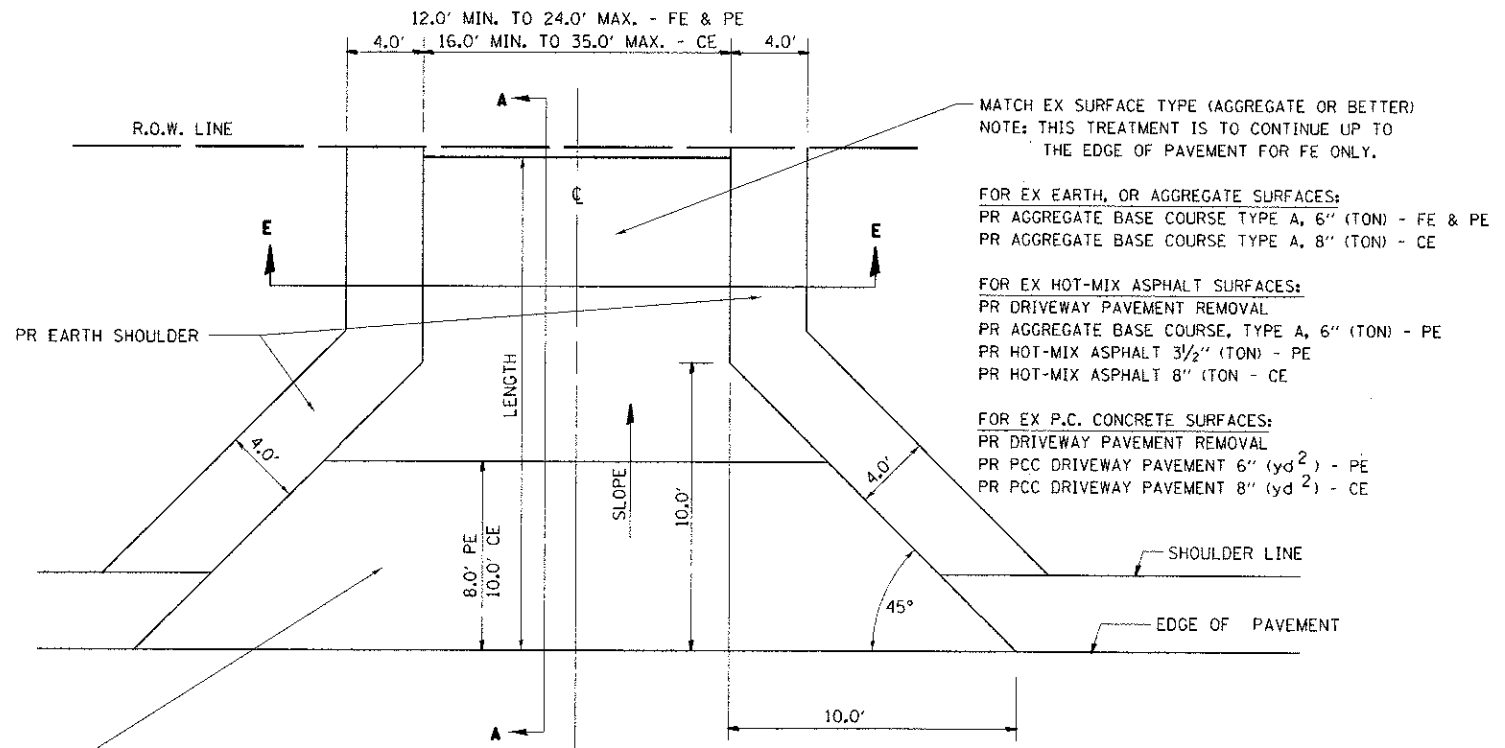
SECTION A-A FOR EX EARTH/AGGREGATE CE



SECTION A-A FOR EX HOT-MIX ASPHALT PE & CE



SECTION A-A FOR EX P.C. CONC. PE & CE



FOR EX EARTH, AGGREGATE, P.C. CONCRETE, OR HOT-MIX ASPHALT SURFACES:
 PR DRIVEWAY PAVEMENT REMOVAL (IF APPLICABLE)
 PR AGGREGATE BASE COURSE TYPE A 6" (TON) - FE
 PR AGGREGATE BASE COURSE TYPE A, 6" (TON) &
 PR HOT-MIX ASPHALT 3 1/2" (TON) - PE
 PR HOT-MIX ASPHALT 8" (TON) - CE

MATCH EX SURFACE TYPE (AGGREGATE OR BETTER)
 NOTE: THIS TREATMENT IS TO CONTINUE UP TO THE EDGE OF PAVEMENT FOR FE ONLY.

FOR EX EARTH, OR AGGREGATE SURFACES:
 PR AGGREGATE BASE COURSE TYPE A, 6" (TON) - FE & PE
 PR AGGREGATE BASE COURSE TYPE A, 8" (TON) - CE

FOR EX HOT-MIX ASPHALT SURFACES:
 PR DRIVEWAY PAVEMENT REMOVAL
 PR AGGREGATE BASE COURSE, TYPE A, 6" (TON) - PE
 PR HOT-MIX ASPHALT 3 1/2" (TON) - PE
 PR HOT-MIX ASPHALT 8" (TON) - CE

FOR EX P.C. CONCRETE SURFACES:
 PR DRIVEWAY PAVEMENT REMOVAL
 PR PCC DRIVEWAY PAVEMENT 6" (yd²) - PE
 PR PCC DRIVEWAY PAVEMENT 8" (yd²) - CE

GENERAL NOTES:

THE RESIDENT ENGINEER WILL DETERMINE THE EXACT TYPE OF IMPROVEMENT TO BE COMPLETED FOR ALL ENTRANCES, SIDEROADS AND MAILBOX TURNOUTS ON THIS PROJECT.

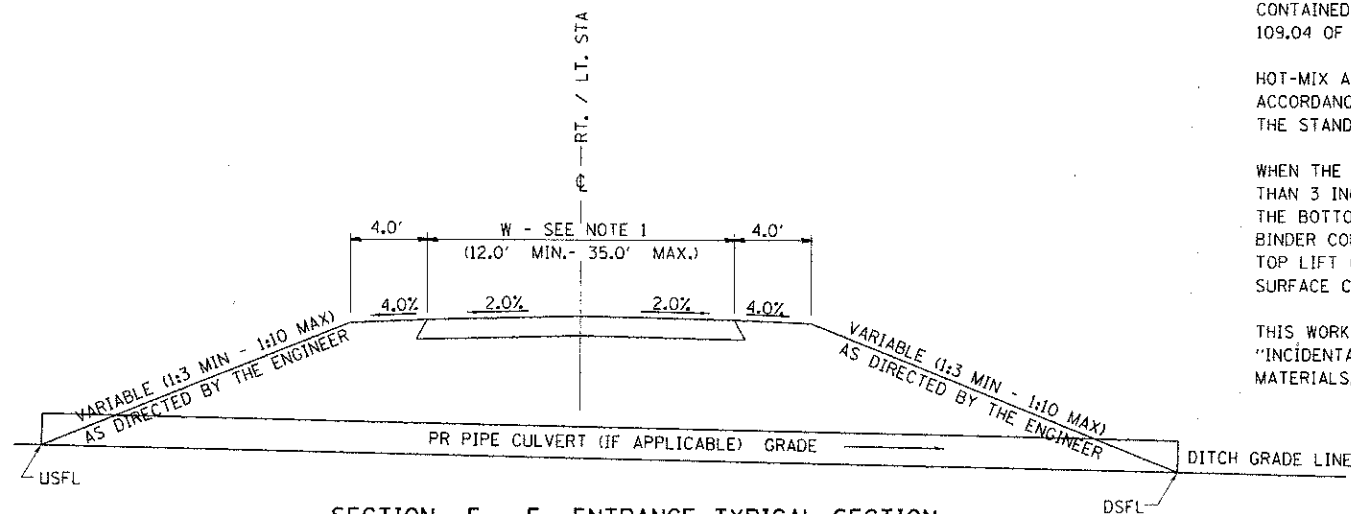
THE PLAN DETAILS AND SCHEDULES SHOULD BE USED AS A GUIDE FOR THE ENGINEER TO IMPLEMENT THE FINAL DESIGN. THE ENGINEER MAY DECIDE TO SALVAGE PORTIONS OF THE EXISTING ENTRANCE PAVEMENT STRUCTURE; THEREFORE, REDUCING PAY ITEM QUANTITIES. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR THIS REDUCTION IN QUANTITIES.

ANY WORK THE ENGINEER REQUIRES WHICH IS NOT COVERED BY A PAY ITEM CONTAINED IN THE PLANS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

HOT-MIX ASPHALT REQUIRED TO CONSTRUCT THE ENTRANCES SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 406 AND 408 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

WHEN THE HOT-MIX ASPHALT PROPOSED FOR THE IMPROVEMENT IS THICKER THAN 3 INCHES AND REQUIRES PLACEMENT IN MORE THAN ONE LIFT, THE BOTTOM LIFT(S) SHALL MEET THE REQUIREMENTS OF HOT-MIX ASPHALT BINDER COURSE IN SECTION 406 OF THE STANDARD SPECIFICATIONS AND THE TOP LIFT OF 2 INCHES SHALL MEET THE REQUIREMENTS OF HOT-MIX ASPHALT SURFACE COURSE, MIXTURE "C".

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR "INCIDENTAL HOT-MIX ASPHALT SURFACING" WHICH SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR INVOLVED.

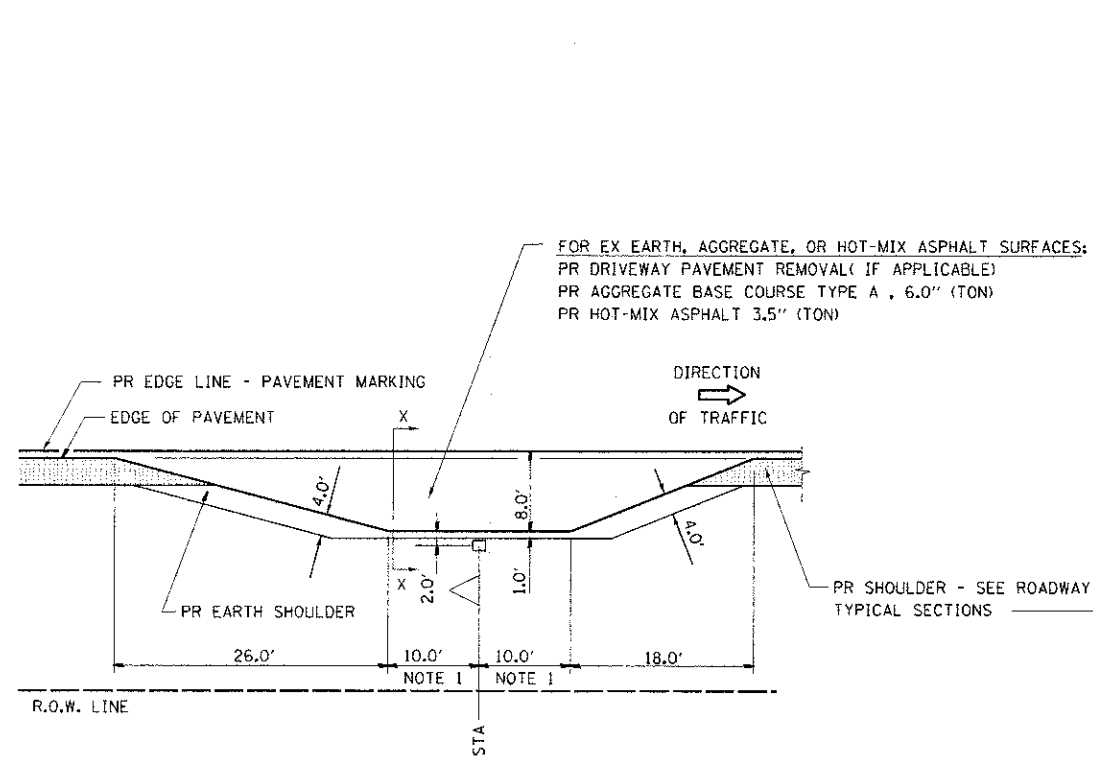


SECTION E - E ENTRANCE TYPICAL SECTION

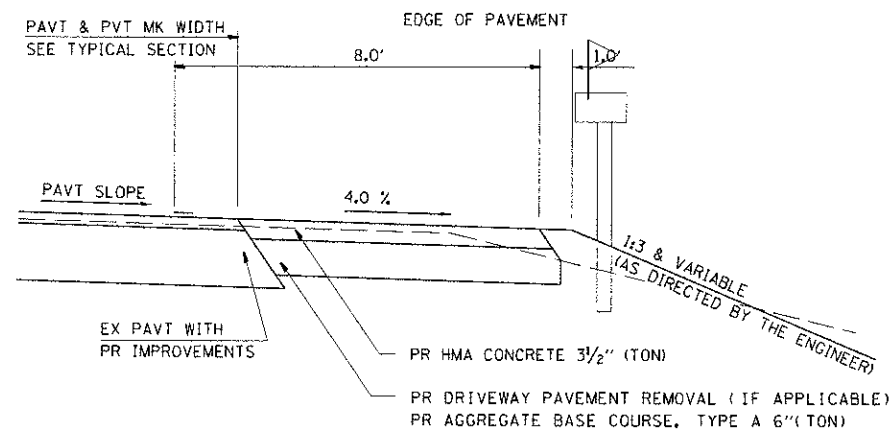
NOTE 1: WIDTH OF ENTRANCE MAY BE INCREASED AT THE PIPE CULVERT DUE TO THE DITCHLINE BEING LOCATED IN THE ENTRANCE FLARE AREA.

FILE NAME =	USER NAME = bgj	DESIGNED - SEB	REVISED -	ADAMS COUNTY HIGHWAY DEPARTMENT	MISCELLANEOUS DETAILS - ENTRANCE & MAILBOX TURNOUT	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\11f\100\5405 Plans\Current\54_M02\11015.dgn		DRAWN - EBB	REVISED -			1598	11-00218-00-BR	ADAMS	53	46	
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PLOT DATE = 11/5/2012		DATE - 6-21-12	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: NONE	SHEET NO. 1 OF 3 SHEETS		STA.	TO STA.		

DETAILS OF MAILBOX TURNOUTS

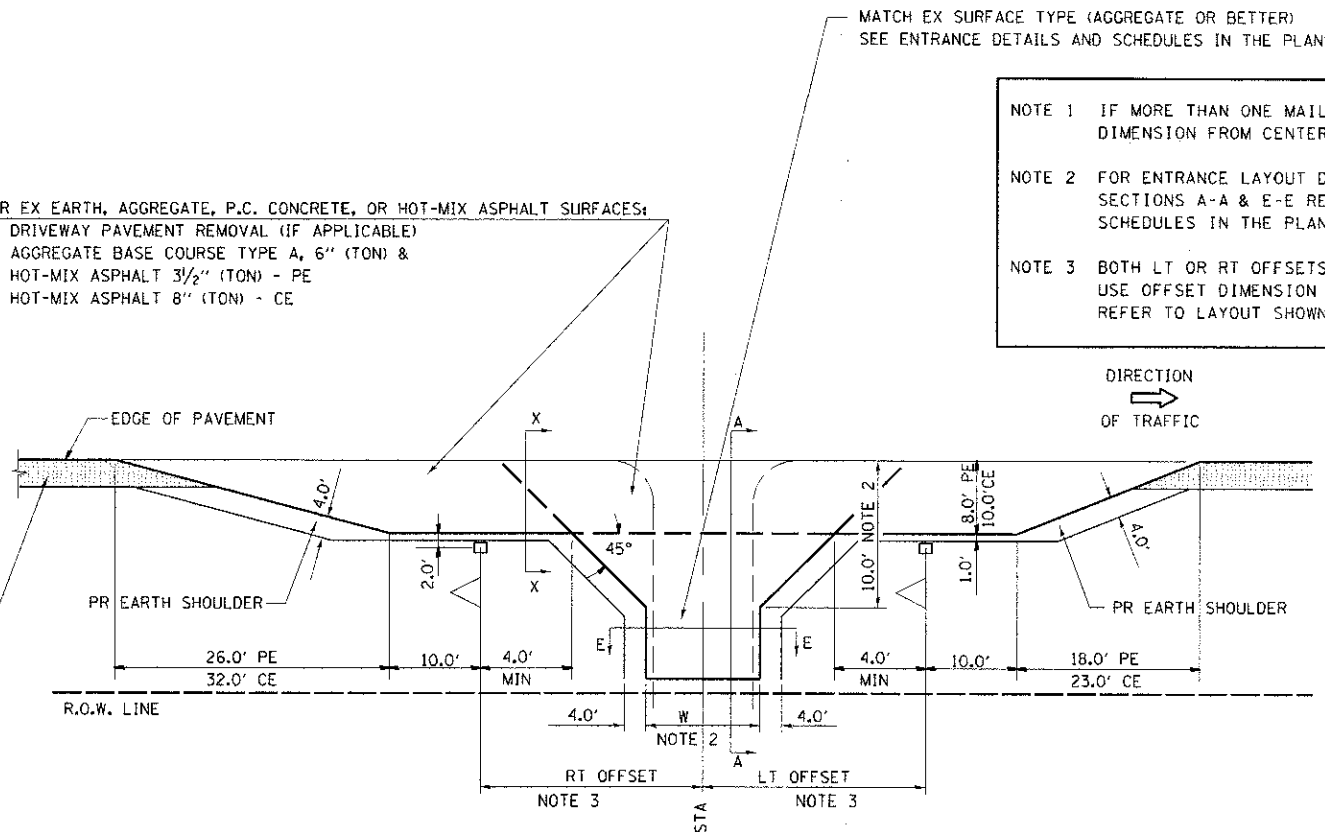


PLAN - MAILBOX TURNOUTS

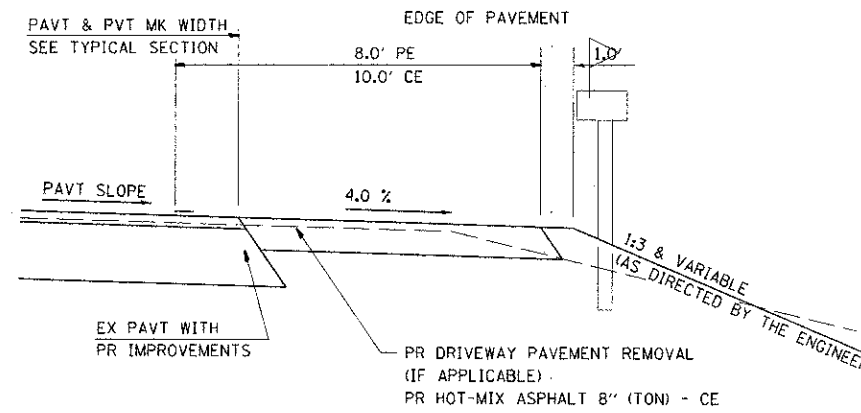


SECTION X-X THRU MAILBOX TURNOUT
 ALSO APPLIES TO MAILBOX TURNOUTS COMBINED WITH EX EARTH, AGGREGATE, P.C. CONCRETE, OR HOT-MIX ASPHALT PE & FE

FOR EX EARTH, AGGREGATE, P.C. CONCRETE, OR HOT-MIX ASPHALT SURFACES:
 PR DRIVEWAY PAVEMENT REMOVAL (IF APPLICABLE)
 PR AGGREGATE BASE COURSE TYPE A, 6" (TON) &
 PR HOT-MIX ASPHALT 3 1/2" (TON) - PE
 PR HOT-MIX ASPHALT 8" (TON) - CE



PLAN - COMBINED MAILBOX TURNOUT WITH TRAILING OR LEADING ENTRANCE



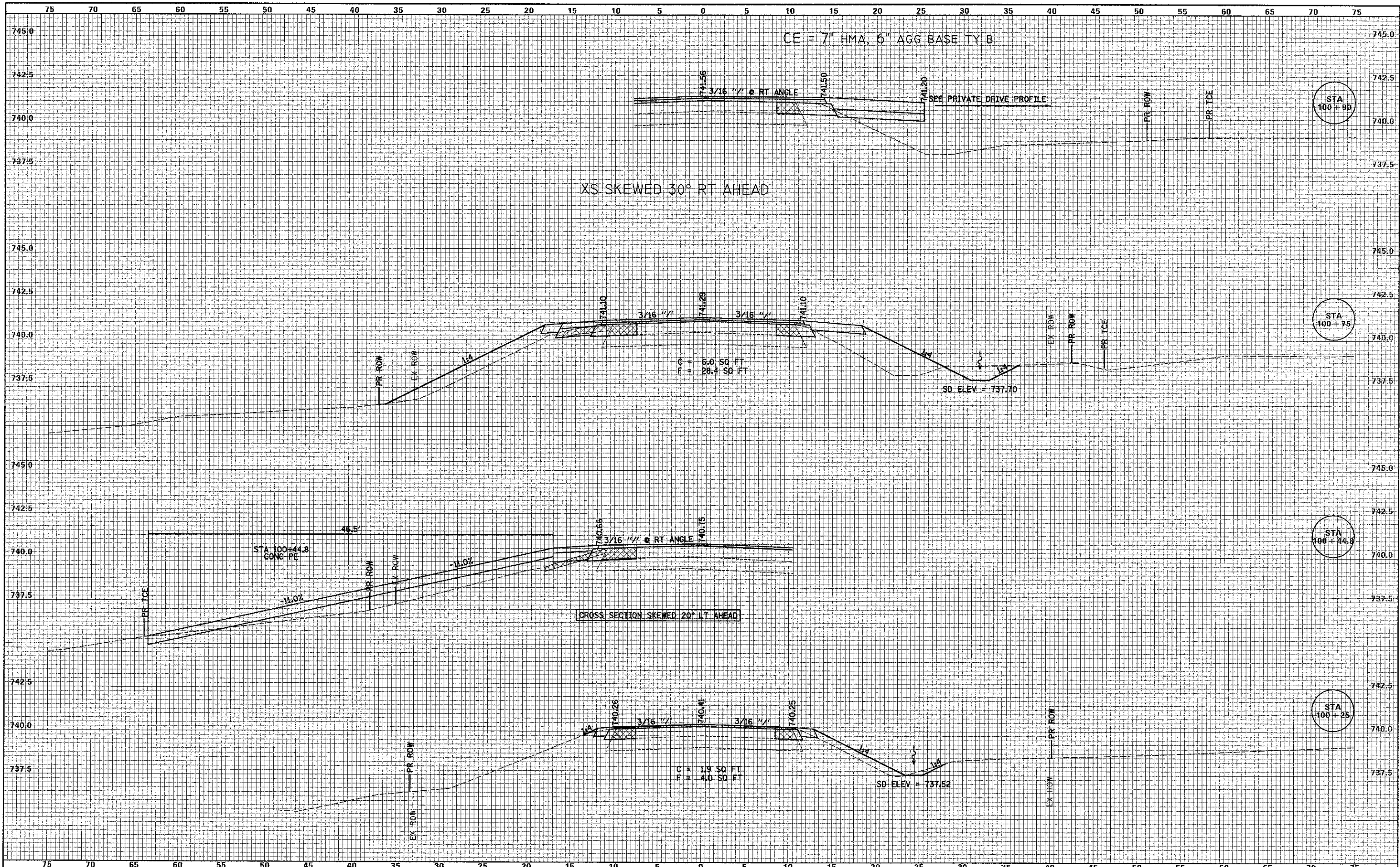
SECTION X-X THRU MAILBOX TURNOUT
 COMBINED WITH EX EARTH, AGGREGATE, P.C. CONCRETE, OR HOT-MIX ASPHALT CE

- NOTE 1 IF MORE THAN ONE MAILBOX IS PRESENT, DIMENSION FROM CENTER OF END MAILBOX.
- NOTE 2 FOR ENTRANCE LAYOUT DIMENSIONS AND SECTIONS A-A & E-E REFER TO THE SCHEDULES IN THE PLANS.
- NOTE 3 BOTH LT OR RT OFFSETS FOR MAILBOX SHOWN USE OFFSET DIMENSION PER SCHEDULE AND REFER TO LAYOUT SHOWN ON THE PLAN.

FILE NAME =	USER NAME = bgj	DESIGNED = SEB	REVISED =	ADAMS COUNTY HIGHWAY DEPARTMENT	MISCELLANEOUS DETAILS - ENTRANCE & MAILBOX TURNOUT	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
G:\11files\110015\05 Plans\Current\SH.M00	11015.dgn	DRAWN = EBB	REVISED =			1598	11-00218-00-BR	ADAMS	53	47	
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	PLOT DATE = 11/5/2012	DATE = 6-21-12	REVISED =			ILLINOIS FED. AID PROJECT					
					SCALE: NONE	SHEET NO. 2 OF 3 SHEETS		STA.	TO STA.		

DATE	BY
SURVEYED	
PLOTTED	
NOTE BOOK	
TEMPERATURE	
AREAS CHECKED	

DATE	BY
SURVEYED	
PLOTTED	
NOTE BOOK	
TEMPERATURE	
AREAS CHECKED	



FILE NAME = Q:\11\10215\05 Plans\Current\SH_XS_11015.dgn
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 PLOT DATE = 1/17/2013

DESIGNED - SEB	REVISED - SEB - 1/16/13
DRAWN - EBB	REVISED -
CHECKED - SRW	REVISED -
DATE - 6-21-12	REVISED -

**ADAMS COUNTY
HIGHWAY DEPARTMENT**

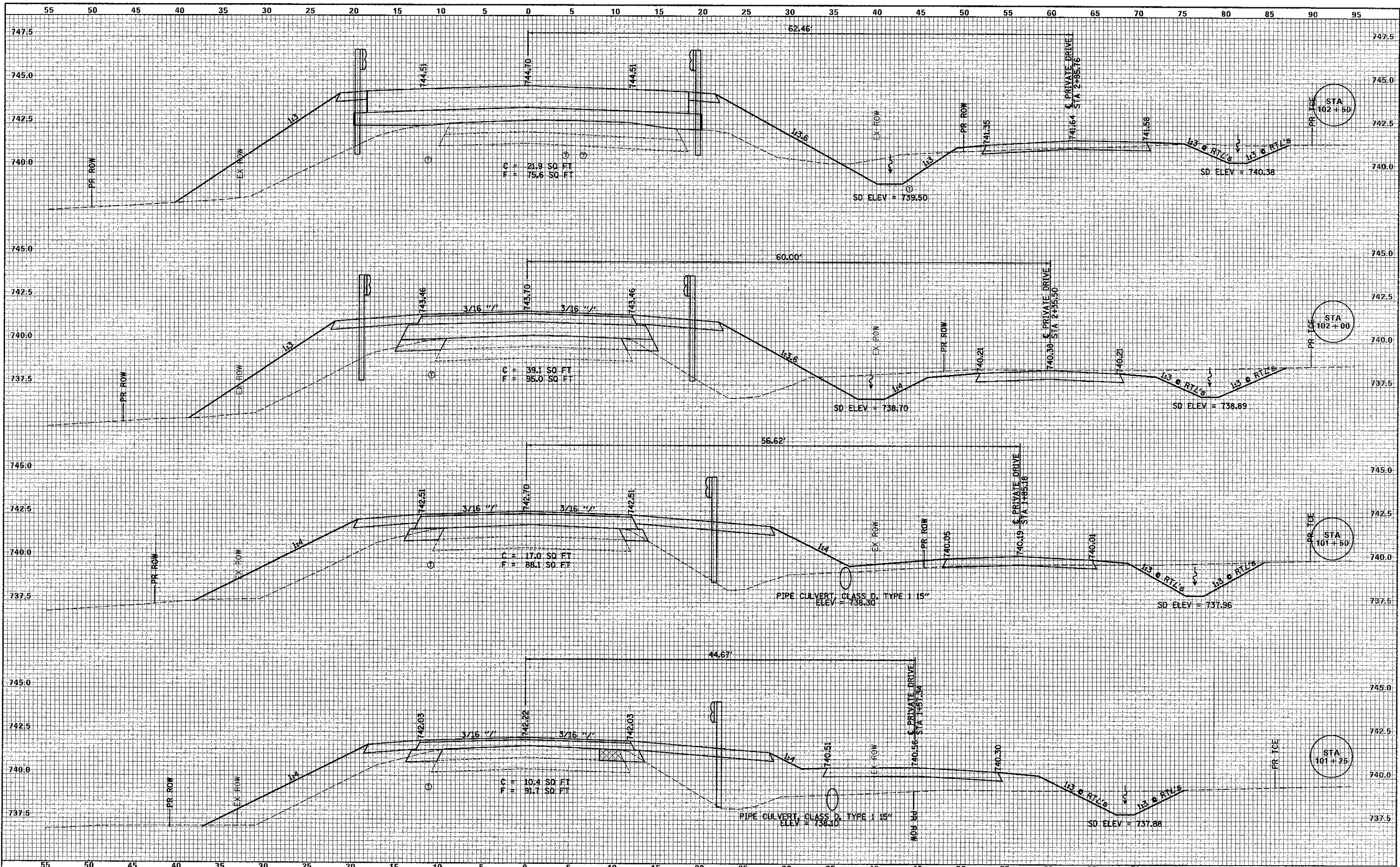
**FAS 1598 (CH 27 / CANNONBALL ROAD)
CROSS SECTIONS
STA 100+25 TO STA 100+90**

SCALE: 1" = 5' H, 1" = 20' V SHEET NO. 1 OF 5 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1598	11-002118-00-BR	ADAMS	53	49
CONTRACT NO. 93590			ILLINOIS FED. AID PROJECT	

DATE: _____ BY: _____
 ORIGINAL SURVEYED _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 TEMP DATE _____
 AREAS CHECKED _____
 NO. _____

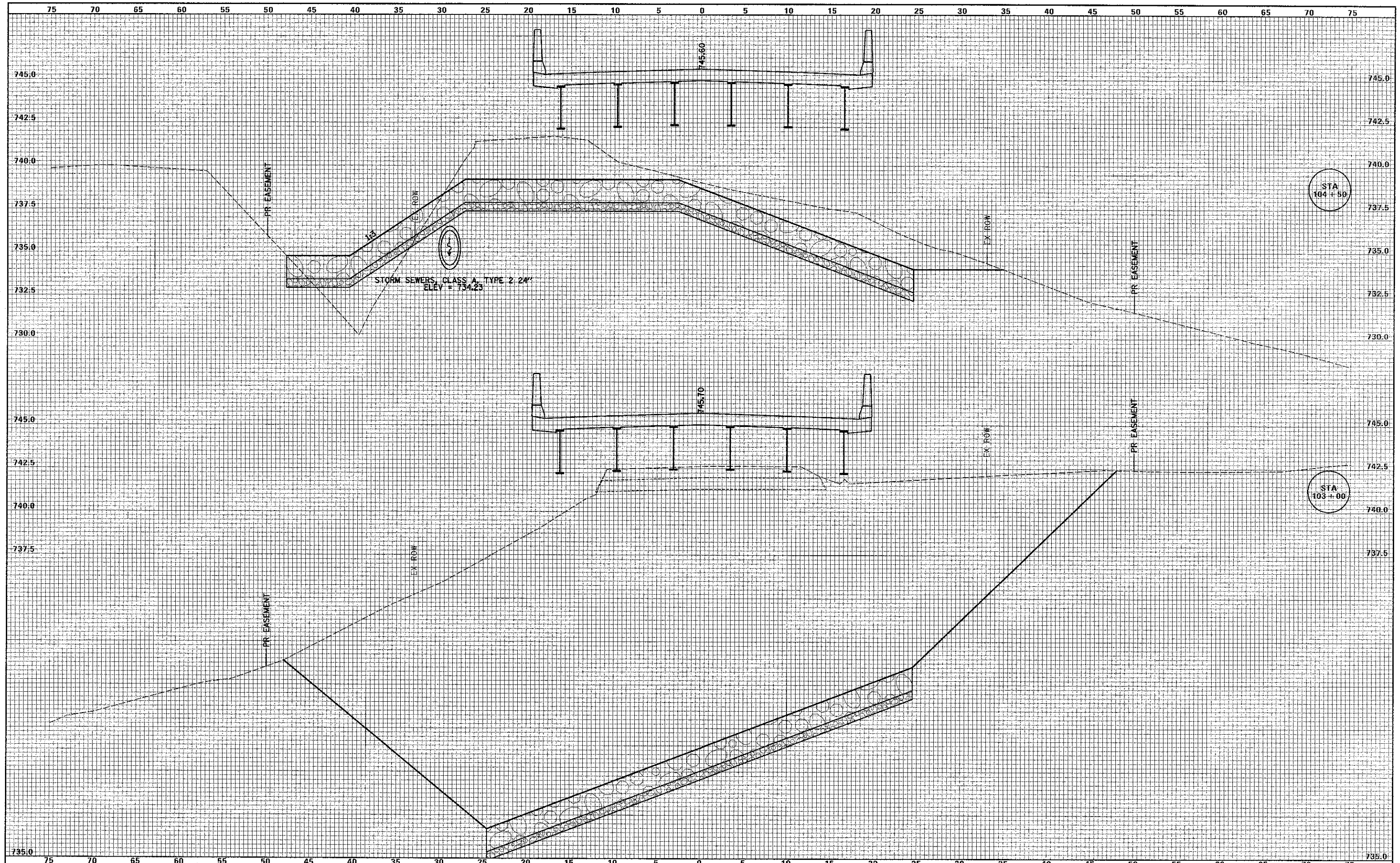
DATE: _____ BY: _____
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 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 TEMP DATE _____
 AREAS CHECKED _____
 NO. _____



FILE NAME = G:\11\15\15\25 Plans\Current\SHLX5.11015.dwg	USER NAME = seb	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 / CANNONBALL ROAD) CROSS SECTIONS STA 101+25 TO STA 102+50		F.A.S. RTE. 1598	SECTION 11-002118-00-BR	COUNTY ADAMS	TOTAL SHEETS 53	SHEET NO. 50	CONTRACT NO. 93590	
PLOT SCALE = 5,0000 1/16" = 1'	CHECKED - SRW	DATE - 6-21-12	REVISED -		SCALE: 1" = 25.0'	SHEET NO. 2 OF 5 SHEETS	STA. _____ TO STA. _____	ILLINOIS FED. AID PROJECT					
PLOT DATE = 1/17/2013	DATE - 6-21-12	REVISED -	REVISED -										

DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____

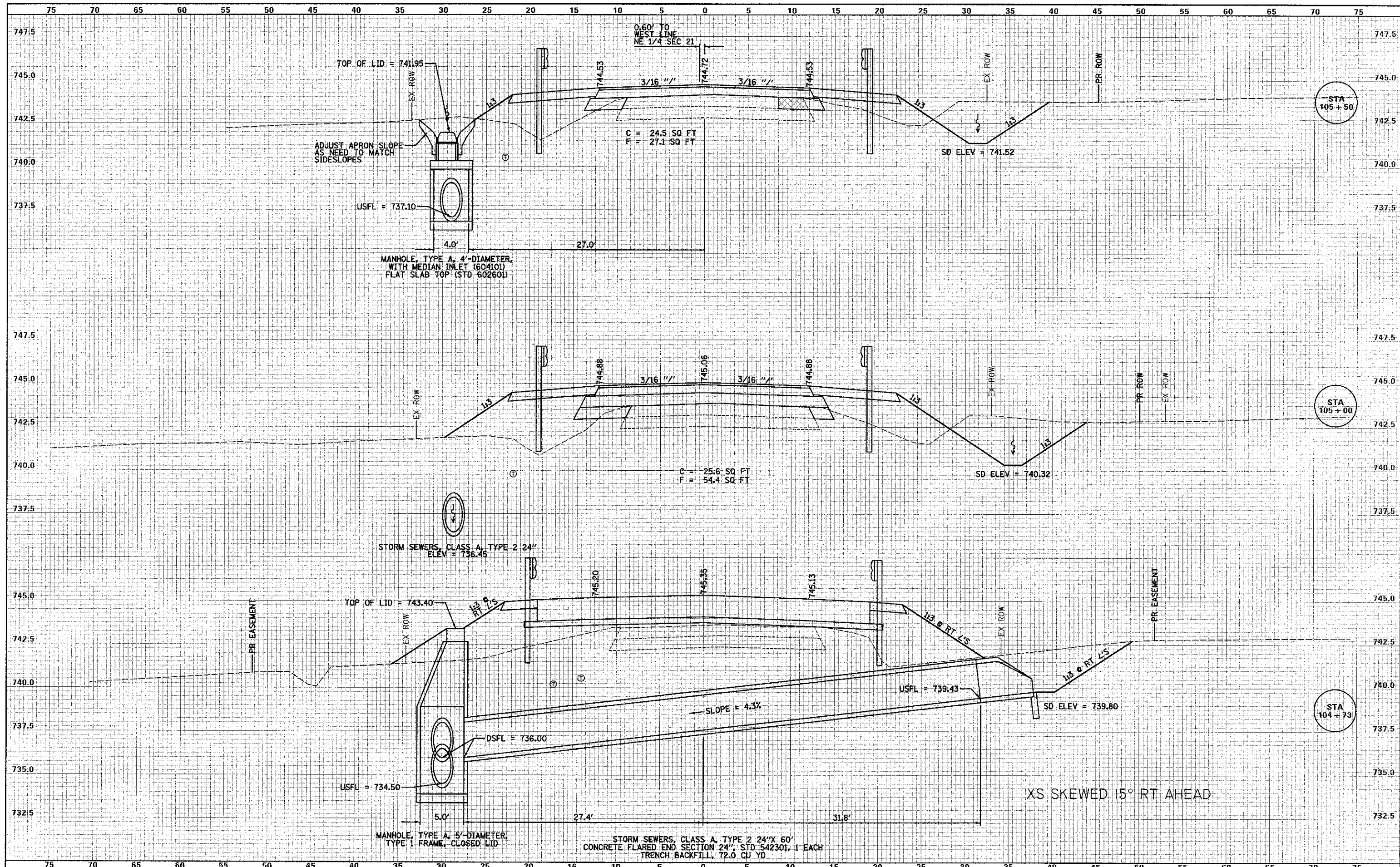
DATE: _____
 BY: _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____



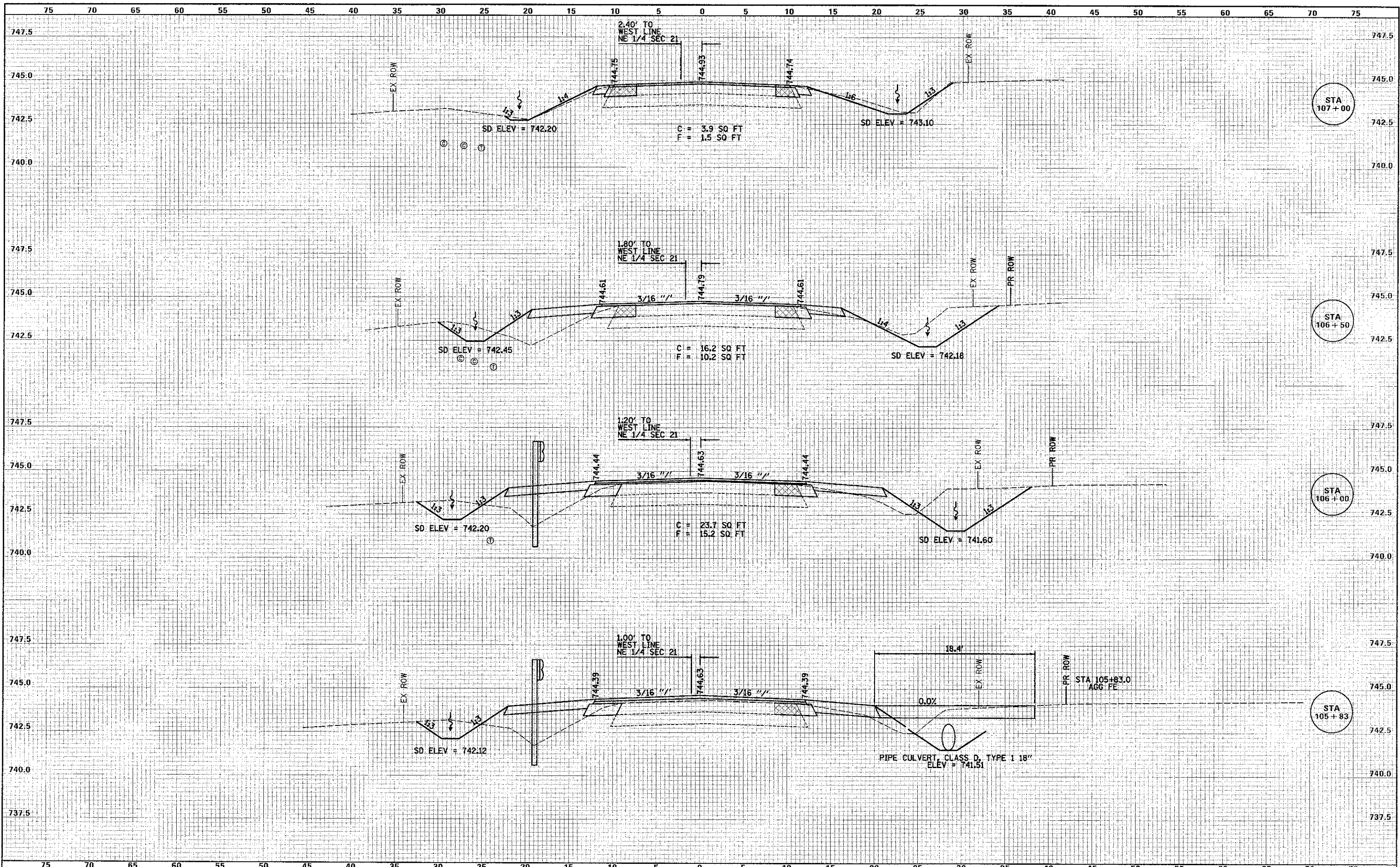
FILE NAME =	USER NAME = web	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 / CANNONBALL ROAD) CROSS SECTIONS STA 103+00 TO STA 104+50	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Q:\11\Files\110015\05 Plans\Current\SH.XS.11015.dgn	PLOT SCALE = 5,0000' / 1" =	DRAWN - EBB	REVISED -			1598	11-002118-00-BR	ADAMS	53	51	
PLOT DATE = 1/17/2013	DATE - 6-21-12	CHECKED - SRW	REVISED -			CONTRACT NO. 93590					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

DATE	
BY	
CHECKED	
DESIGNED	
DRAWN	
PLT	
FILE NAME	

DATE	
BY	
CHECKED	
DESIGNED	
DRAWN	
PLT	
FILE NAME	



FILE NAME	USER NAME	DESIGNED	SEB	REVISED	SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 / CANNONBALL ROAD) CROSS SECTIONS STA 104 + 73 TO STA 105 + 50		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
PL01 SCALE = 1"=20.0'		DRAWN	EBB	REVISED			1598	11-002118-00-BR	ADAMS	53	52	
PL02 DATE = 1/27/2013		CHECKED	SRW	REVISED			SCALE: 1"=20.0' H 1"=20.0' V		SHEET NO. 4 OF 5 SHEETS		STA. TO STA.	CONTRACT NO. 93590
		DATE	6-21-12	REVISED							ILLINOIS FED. AID PROJECT	



DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DESIGNED BY: _____
 REVISIONS: _____
 APPROVED BY: _____

PROJECT: _____
 SHEET: _____
 DATE: _____
 SCALE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DESIGNED BY: _____
 REVISIONS: _____
 APPROVED BY: _____

FILE NAME =	USER NAME =	DESIGNED - SEB	REVISED - SEB - 1/16/13	ADAMS COUNTY HIGHWAY DEPARTMENT	FAS 1598 (CH 27 /CANNONBALL ROAD) CROSS SECTIONS STA 105+83 TO STA 107+00		F.A.S. RTE. 1598	SECTION 11-002118-00-BR	COUNTY ADAMS	TOTAL SHEET SHEETS, NO. 53 53
C:\Users\ADMIN\Documents\ASPL\2013\105+83		DRAWN - EBB	REVISED -		SCALE: 1"=25' H 1"=25' V	SHEET NO. 5 OF 5 SHEETS	STA. TO STA.	CONTRACT NO. 93590		ILLINOIS FED. AID PROJECT
PLOT SCALE = 5/62500 / in.		CHECKED - SRW	REVISED -							
PLOT DATE = 1/17/2013		DATE - 6-21-12	REVISED -							